Knut Roar Engh & Richard Rose

ASSESSMENT FOR LEARNING IN INCLUSIVE SCHOOLS

Richard Rose

Richard Rose is Professor of Inclusive Education and Director of the Centre for Education and Research at the University of Northampton, UK. He has previously held posts as a teacher and head teacher in England and as an inspector of schools. He is the author of twelve books on various aspects of education and many papers in academic journals. He has conducted research and consultancy in many parts of the world, was Visiting Professor at the Hong Kong Institute of Education and leads an MA course in special and inclusive education in Bangalore, India.

Knut Roar Engh

Knut Roar Engh is Professor of Education Vestfold and Buskerud University College, Norway.
Engh has been active in teaching assessment to teacher students and teachers in Norway, and studied the use of assessment in schools. For many years he has supervised schools in assessment for learning, and published books and articles on assessment. Engh has also been teaching assessment for teachers in summer school in Tbilisi together with Professor Rose.

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ACKNOWLEDGEMENTS

The inspiration for this book came from the opportunities with which we were provided to work with colleagues in Georgia during summer schools focused upon assessment for learning and inclusion. We are grateful to those Georgian colleagues and also to Einar Christiansen for his support and management of our work in Georgia.

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CHAPTER 1

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INTRODUCTION: THE THEORY AND PRINCIPLES OF ASSESSMENT FOR LEARNING

For as long as there has been education and teaching teachers have been concerned to assess their students. Assessment has traditionally been seen as a means of identifying the achievements of students and the progress that learners have made over a given period of instruction. This functional approach to assessment remains important, however, if teachers restrict their interpretation of the value of assessment to that of a means of measurement they are missing many opportunities to improve the quality of their teaching, their understanding of their students and the learning experiences of their classes. This book challenges many of the simplistic views of assessment and within the following chapters we argue that the development of assessment approaches that are founded upon principles of inclusive education and a recognition of the need to develop holistic views of learners and learning is far more appropriate in addressing the demands of education in the twenty first century.

For many years assessment in schools has tended to follow three main purposes. The first of these, often referred to a diagnostic assessment has focused upon the identification of what are perceived as potential obstacles to learning. Diagnosis is most often associated with medicine and the use of diagnostic assessment in education has led to the acceptance of medico-deficit models which we would argue has been detrimental to the provision of effective and inclusive schooling. In education, diagnostic assessment has been concerned, often through the use of standardised testing to provide labels which have an immediate impact upon the student. The use of IQ tests, still a common practice in many countries, has led to many students being given negative labels, such as having learning difficulties or being "slow learners" that have led to a lowering of teacher expectations and in some cases their marginalisation from their "more able" peers. In some instances,

where students have a medical condition or syndrome such as autism spectrum disorder or Down Syndrome there has been an automatic suggestion that such a diagnosis means that they will have limited ability to learn. However, there are many examples of young people with such conditions having proven themselves to be successful learners and to have established successful post-school lives (Williams, 1994; Gray-Thomson, 2002). If teacher rely too heavily upon diagnostic assessment there is a danger that students become stereotyped and that expectations of what they might achieve will be very low.

This is not to suggest that diagnosis is not an important process. For example, undertaking assessments that identify a student as having dyslexia may well be helpful in enabling teachers to adopt appropriate or specialist teaching approaches to benefit the learner. However, diagnostic assessment alone will not inform the teacher of how they may plan to meet the needs of the dyslexic student or provide information about the student's learning strengths. This requires a far more student centred approach to assessment and a commitment to assessment for learning as described throughout this book.

Summative assessment is that most commonly seen in use in schools. At the end of a course of teaching teachers need to know what their students have learned and whether that learning can be applied. Traditionally teachers have used end of course tests or formal examinations in order to assess how much students have retained from the learning programme. Over time through regular assessment of this summative nature teachers can make generalisations about student progress and can compare the attainment of individual students to that of their peers. This form of summative assessment is clearly important in enabling teachers to track the progress of their students. We would suggest that summative assessment can be far more effective if it also considers issues related to the effectiveness of teaching and the management of resources and the teaching environment and

we will be discussing this situation later in this text.

Summative assessment is often most useful when it is combined with other less formal approaches to provide information that assists planning for future teaching. At this point a more formative assessment system can be developed. Formative assessment implies making use of assessment data to ensure that the planning for individuals or groups of students is clearly focused upon their needs. This requires that not all students will learn at the same pace, or through the same teaching approaches or using the same resources and that information gained through assessment can assist the teacher in recognising the diversity of student needs and in differentiating to address these in the classroom.

These three traditional pillars of assessment, diagnostic, summative and formative have been well documented (Taylor, 2000; Gronlund and Waugh, 2009) and have informed the education system in most countries for many years. Each continues to have an important role to play in enabling teachers to understand the needs of their students, to measure progress and attainment and to plan for effective teaching. Whilst acknowledging the importance of these three elements we would suggest that these alone are insufficient to ensure the development of fully effective teaching approaches. Throughout this book we will challenge some of the conventional thinking around assessment as we argue that assessment should be an integral and on-going part of learning and not a separate process that is conducted only at set intervals. It is our contention that in classrooms that have a commitment to equity and to ensuring good access to learning for all students, regardless of need or ability, it is necessary to develop assessment for learning as opposed to assessment of learning. For some teachers this will require changes in their classroom practices and routines, but more importantly it demands a commitment to developing effective learning partnerships between teachers and students in order to understand how to implement teaching and learning approaches that have the greatest impact upon the progress and attainment of each student.

The principles of assessment for learning place the learner at the heart of the learning and assessment process. It emphasises the need for students themselves to understand their own learning strengths and needs and to feel that they can influence their own performance in the classroom.

This requires that teachers have a commitment to tailoring assessment processes to the needs of students and implementing systems of communication that enable a detailed understanding of learning needs to be established. Loreman, Deppeler and Harvey (2010) have produced a helpful checklist of the conditions required for assessment for learning to be effective:-

- believe that every student can improve
- believe that teachers and students should learn to gether rather than in isolation
- systematically collect and analyse evidence with purposeful aims
- review and reflect on performance and progress with students
- encourage students and peers to interact in reviewing performances and help each other to reach common understandings
- recognise that both motivation and confidence are crucial for effective learning and progress, and that these can be increased by effective AFL practices
- create a learning environment where students feel free to articulate their ideas without fear or embarrassment
- encourage and model the sharing of ideas and active listening to alternative views
- support students' learning by building cumulative successes

(Loreman, Deppeler and Harvey, 2010 p.65)

An understanding of assessment for learning demands that we re-examine the teacher and student relationship. It also requires an interrogation of how we develop effective teaching environments and an appreciation that learning outcomes related to any course of teaching are likely to vary according to student needs and abilities. A seminal paper written by Black and William (1998) presented findings from 250 international studies conducted over nine years. Their conclusions within this paper emphasised that when effectively deployed, assessment for learning with its focus upon understanding the diverse factors that influence teaching and learning outcomes, assessment for learning had a greater impact upon student performance than most other teacher interventions. In particular they emphasised how the performance of low achievers was improved whenever schools

introduced assessment for learning as a key strategy. Other studies (OECD, 2005; Rodriguez, 2004) have endorsed the findings of Black and Williams and have suggested that successful teachers are most likely to demonstrate the principles of assessment for learning within their classrooms.

The implementation of assessment for learning is not a mechanistic process. Whilst the introduction of specific approaches to assessment will undoubtedly yield results, it is important to address issues of expectation and attitude towards students if these results are to be sustainable. Effective assessment for learning requires teachers to adopt inclusive approaches to teaching and education systems to develop policies that promote the inclusion of all learners regardless of needs and abilities. Low expectations of students who have been labelled as having learning difficulties, special educational needs or disabilities have resulted in underachievement and poor attainment in these students. The promotion of inclusive education has been recognised internationally as a critical factor in raising the learning attainment of students across education systems (UNESCO, 1994). In chapter two the concept of inclusion is explored in greater detail and its importance in developing assessment for learning will be discussed.

Assessment for learning and inclusive education are the twin pillars upon which our arguments within this book are founded. We would contend that it is not possible to develop meaningful assessment processes unless this is within the context of classrooms that are committed to inclusive practices. Throughout this book we provide examples of how assessment processes can recognise the diversity of learning needs that are commonly experienced within our classrooms today. The practical application of principles requires a realignment of teaching practices that will not be achieved without a clear discussion and debate of how these may be applied. Within this text we attempt to present the advantages that may emanate from assessment for learning and to guide teachers through the ways in which this may be applied.

WHAT DOES THIS MEAN FOR TEACHERS IN GEORGIA?

Every country has developed its own unique systems of education, though most have established common characteristics around the establishment of learning priorities (such as literacy and numeracy) and the necessity to prepare young people for post-school life. Assessment for learning and inclusive education both have their origins within western socio-economically advantaged countries. However, there is increasing evidence of innovative approaches to interpreting both of these ideas in less advantaged countries (Booth and Ainscow, 1998).

In Georgia there is a significant commitment to change education systems to ensure that all learners gain access to effective teaching and become successful learners. In addition a renewed focus upon the professional development of teachers affords an opportunity to promote change. As authors of this book we are not suggesting that teachers in Georgia should simply adopt the ideas presented within the text. We believe that Georgian teachers are innovative and skilled and have the ability to take the principles presented within this book and to modify and apply these within their classrooms. It is to be hoped that this book will promote discussion and encourage teachers in Georgia to develop their own systems in support of more equitable systems of teaching and assessment.

CHAPTER SUMMARY

Assessment for learning (SFL) adopts a set of principles that recognise that assessment is an integral part of the teaching and learning process and not an add-on activity. Assessment should inform teaching and recognise the achievements, attainments and progress of all students, regardless of their needs or abilities. Teachers who adopt the principles of assessment for learning give a commitment to democracy and recognise the need to take account of the views of their students and to involve them fully in the assessment and planning activities that characterise the everyday classroom. A commitment to assessment for learning also acknowledges the need to consider those influences such as the classroom environment and the resources used that impact upon the quality of student learning experiences and the ability of teachers to teach effectively. This chapter has set the theme for the book and we will explore the issues raised in detail as the chapters continue.

CHAPTER 2

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CREATING INCLUSIVE CLASSROOMS

The terms 'inclusion' and 'inclusive education' have entered into the language of schooling and become established as indicating an ideal goal to which all education systems should strive. The notion that schools should be inclusive and should embrace the needs of diverse learners to reflect the whole population of the societies in which we live, has been a source of debate and development in the education systems of many countries (Ainscow, Howes, Farrell and Frankham, 2003). If we take the view that the opposite of inclusion is exclusion then we suspect that few teachers would support a proposal that children should be discriminated against and excluded from opportunities to attend a school that can provide them with an appropriate education. However, whilst governments around the world have espoused the importance of creating more equitable and inclusive education systems, and have been signatories to international agreements intended to promote inclusive schooling (UNESCO, 1994; World Education Forum, 2000) the definition of inclusion has remained nebulous and its interpretation has been characterised by confusion and obfuscation.

The term inclusion is seen as important throughout this book and it is therefore essential that from the outset we clarify the way in which it is used within the text. Furthermore, it is necessary to articulate the reasons why we perceive the link between assessment for learning and inclusion as being at the core of the principles that we would wish to promote in schools.

Defining inclusion is far from straightforward. In many education systems the term has been interpreted as a philosophy of ensuring that all children are educated in mainstream classrooms alongside their peers, regardless of needs or ability. This interpretation has considerable validity in western societies where the right to education has been long established and many children with disabilities or spe-

cial educational needs have been long established in segregated special schools. The experience gained in teaching pupils with special educational needs within such societies has paved the way for a greater understanding of pedagogy and the development of specialist approaches to teaching this population. Where this has occurred over time, it has led to a natural progression whereby educators wish to see all schools adopting approaches that will encourage teaching to support diverse learners. It is important, however to recognise that not all education systems or national education policies are at the same point of development and that it may be detrimental to the quality of teaching to assume that all students can be automatically placed into mainstream schools before teachers have been adequately prepared to address the needs of a wider school population. Examples do exist where policies of inclusive schooling have been developed in many countries where socio-economic conditions are far from favourable (Singal 2006; Deng 2010), but it should not be assumed that all countries are in a position to move forward at the same pace, or that only one model for the development of inclusion exists. In some countries there have been significant numbers of children for whom education has not been provided. The reasons for this are often associated with economic disadvantage but also related to a lack of understanding of the potential of children who may have a label such as disability or learning difficulty or simply because the necessity to provide education to girls or those from ethnic minority groups such as Roma people has never been seen as a priority. The Millennium Development Goals recognised the challenges associated with providing a more inclusive education system by calling for the establishment of universal primary education, but acknowledged that for some countries achieving this goal would be difficult and would take time. A report on the progress made towards achieving the Millennium Development Goals (United Nations, 2012) indicates significant

progress in this area, particularly in respect of the education of girls. The same report sadly states that "ensuring that all children are able to complete primary education remains a fundamental, but unfulfilled, target that has an impact on all the other Goals" (Page 3).

This broad and international discussion of inclusion is important in enabling us to contextualise the issue and to assist in setting the scene for what might be done by teachers in schools to promote inclusive educational practice. We would contend that the development of equitable societies in which all individuals are valued and treated with respect is dependent upon schools adopting principles that instil positive values in their students. The pursuit of inclusive schooling and assessment for learning is a fundamental part of assisting individuals to develop those skills, attitudes and understanding that will ultimately contribute to the development of a fair society where all individuals are valued.

Inclusion International, an organisation largely run by people with disabilities and special educational needs has defined inclusion as follows:-

"Inclusion refers to the opportunity for persons with a disability (or special educational need) to participate fully in all of the educational, employment, consumer, recreational, community and domestic activities that typify everyday society."

(Inclusion International, 1996)

This definition quite rightly recognises that inclusion is not simply an education issue but needs to be placed in a much wider societal context. However, education does play an important part in enabling this definition to be achieved. We would suggest that inclusive education may be defined as making such provision in school as is necessary to enable all pupils to learn at a pace and through pedagogical approaches that are appropriate to their needs. In other words, teachers need to focus upon and indeed celebrate the diversity of learning needs to be experienced in any classroom and to examine their own practices in order to attempt to address these needs in their teaching and assessments. This is fundamental to the principles put forward in this book where we suggest that through the development of assessment for learning teachers are most likely to promote learning that is inclusive and supportive of the needs of all learners.

Teachers need to consider inclusion as being both a social and educational process. Students who learn to live with failure in schools often experience similar situations in their post school lives. It is critical that the learning of all students is celebrated and that teachers recognise that whilst some will make progress at a slower rate and will have lower levels of attainment, their endeavours and achievements may be gained through working at least as hard as their more able peers. Traditionally in situations where students with special educational needs or disabilities have been taught in isolation from their peers they have experienced difficulties in making friendships and have experienced problems in adjusting to life is post-school society. It is imperative that teachers consider the social needs and achievements of students and develop effective processes for assessing these and celebrating them. There are many successful individuals in society who are acknowledged for their accomplishments who have achieved low levels of attainment in school. In too many instances schools have become competitive environments where values are built around academic excellence and more holistic approaches to recognising success have been ignored. Assessment for learning must focus not only upon academic attainment, but also upon the wider social development of the individual.

Within any class of students there will be a range of needs and abilities. Even in classrooms where there are no students with major disabilities or sensory impairments there will be some who find learning more difficult than others. This invariably presents a challenge to the most conscientious teachers who would wish to ensure that all students within the class are afforded opportunities to reach their learning potential. There is always a danger that teachers address the needs of the majority of students, whilst those who are either more able or who have difficulties with learning receive less attention. This is not to suggest that teachers are complicit in failing to address the needs of their students, but rather implies that unless structures are put into place to identify the specific needs of individual students and to assist teachers in planning to meet these, the teaching process may prove less effective than we would wish.

Effective teaching requires careful consideration of those processes of assessment that support effective planning, teaching and recognition of student progress. In order to develop inclusive classrooms teachers need assistance in identifying the needs of individual students, in planning for teaching and in assessing not only the achievements and progress of learners but also the efficacy of the teaching approaches used. These aspects of assessment focused clearly not only on the summative aspects of recording student achievement, but also on shaping teaching and classroom management form the core of this book.

Inclusive teaching requires that teachers recognise the importance of establishing positive partnerships with all who have a vested interest in learning. It is essential that teachers afford respect to parents and to students and take account of their own understanding of their learning needs. For too many students school is less than a positive experience. For those who have difficulties with learning each day in school may be seen as a challenge and the difficulties of performing alongside their peers is a daunting experience. Where students feel uncomfortable or apprehensive they are unlikely to learn ef-

fectively and in some instances they give up in their efforts to achieve. There is considerable evidence to suggest that there is a direct correlation between poor classroom behaviour and disaffection in students who feel unable to cope with the academic rigours of the classroom (Garner, 2005; Garner and Davies, 2007). A focus upon ensuring that teaching is planned in a way that recognises the needs of all students in the class is likely to prove beneficial to all learners and assists in the maintenance of effective classrooms.

An early principle of assessment for learning must focus on gaining an understanding of how students perceive their own learning needs. A simple system of key questions has been used in many schools to enable teachers to build an accurate picture of student attitudes and expectations of learning. The following example is taken from a primary school and was used with six year old students. At the beginning of each school term the teacher leads a discussion with students and gets them to complete the form below. She then takes the time to ensure that she has a discussion with each student about how they will work during the term.

TABLE 1: Primary school pupil self-assessment form

The thing I like most about school is…	Seeing my friends and doing art
The thing I don't like about school is…	Difficult maths
The thing that helps me most to learn in class is…	Working with Angela and Freddy
The thing that stops me learning is…	When Mrs Jones [teacher] talks too fast and doesn't give me time to think
The thing I am really good at is…	Art and swimming
The thing I want to get better at is…	Maths and writing
The thing that Mrs Jones can do to help me is…	Speak more slowly and explain things
The thing I can do to help myself is…	Be quiet when Mrs Jones is talking and ask when I need help

This approach has worked well in primary schools and has enabled students to feel valued and included in learning. The following example is taken from a vocational education college and was used specifically with students who have experienced difficulties with learning as they began a course to train as hairdressers.

TABLE 2: Vocational college student self-assessment form

My experience of school was	Positive (OK) Poor [please circle one]
My achievements at school were	Positive OK (Poor) [please circle one]
What qualities do you expect from a good teacher?	Able to listen and explain difficult ideas clearly. Gives time for learning and shows you how to use what you have learned
What have teachers done in the past that has prevented you from learning?	Did not give me time to understand and often didn't explain why I had to learn certain things.
What helps you to learn?	A quiet classroom. Work in manageable chunks, not too much information at any one time.
What do you want to achieve on this course?	I want to be a good ladies hairdresser with all the learning I need to be able to work for myself
What will you do to achieve your goals?	Attend all the lessons. Work hard in classes
Do you have any worries about the course?	There might be a lot of writing to do

The teacher uses this form with each student and discusses it with each individual in turn. It is noticeable in the example provided here that the student feels that her achievements in school were poor. Clearly this can present an obstacle to learning if the student has low self-esteem. Such an assessment helps the teacher to shape the way she will teach and also indicates a commitment to the student in respect of valuing her input to a formative assessment process.

If teachers are to provide inclusive learning environments they will need to be effective in differentiating their teaching in order to recognise the needs of individual students. Within this book we provide examples of how this may be achieved. It is important to recognise that some teachers have apprehensions that classrooms where there are a broad range of learning needs and abilities may have a detrimental impact upon the learning of students or the ability of teachers to teach effectively. Teachers may well believe that students with special educational needs in their classrooms are likely to make greater demands upon teacher time and may distract the learning of others. This is a genuine concern and one that needs to be fully addressed if the development of inclusive schooling is to become a reality.

Lewis (1991) identified a broad range of approaches to differentiation and suggests that effective teachers in inclusive classrooms use all of these at some point in their teaching in order to ensure that students can access learning. Her list of strategies can be useful as an initial form of assessment in helping teachers to identify how she might plan for meeting the needs of individuals in the class. The list of her recommended approaches below has been placed in a framework that enables the teacher to make notes in relation to the needs of her class.

TABLE 3: Approaches to differentiation checklist

✓ Differentiation of content: e.g. pupils in a group all work towards a single aim, such as reading competence, but use several different reading schemes to get there.

✓ Differentiation by interest: e.g. all pupils are producing graphs, but their graphs represent different data according to personal interest.

✓ Differentiation of Pace: all pupils work at the same task, or with the same materials, but the teacher has different expectations of the time required for completion.

✓ Differentiation of access: materials or methods of working is different for individual pupils. E.g. whilst one pupil writes with a pencil another uses a computer and another produces pictorial work.

✓ Differentiation of outcome: e.g. one pupil writes a story, another draws a picture to tell the story and another records the story on audio tape.

✓ Differentiation of curricular sequence: pupils enter the curriculum at different points or take part in the curriculum in a different order from that of his peers.

✓ Differentiation of structure: some pupils work on a step by step (task analysed curriculum) whilst others work on "chunks". Differentiation of teacher time: the teacher gives more time to some pupils during specific tasks in order to ensure access.

✓ Differentiation of teaching style: e.g. some pupils may require individual instruction whilst others can work in small groups or pairs.

✓ Differentiation of level: all pupils work through a similar sequence, in maths for example, but at a variety of levels.

✓ Differentiation by grouping: the teacher groups particular pupils together for specific activities. Pupils act as supporters, or work with peers with whom they are comfortable or confident.

A review of Lewis' list indicates that teachers committed to providing inclusive classrooms need to assess not only their teaching approach but also the needs of the individual student and the creation of an environment conducive to learning. These are amongst the issues that are addressed elsewhere in this book.

Black-Hawkins, Florian and Rouse (2007) considered the impact of including students with special educational needs

in school upon the overall academic performance of students within schools. Their research suggests that schools who give a commitment to developing inclusive practice and support teachers in constructing assessment and planning approaches to meet diverse student needs achieve standards that are at least as good, and often better than other comparable schools. Their findings reinforce those of Aincsow et.al. (2006) who demonstrated how schools that were responsive to individual student needs often achieved higher levels of achievement and attainment than others. When we interrogate the reasons why inclusive schools appear to be successful a number of factors emerge.

Firstly, it appears that teachers who are effectively making use of assessments to understand the needs of individual students are more likely to recognise the learning strengths and preferred learning styles of these individuals. This enables them to adjust their teaching practices in order to accommodate a more diverse range of learners. Secondly, when teachers plan to meet the needs of students who have difficulties with learning, they are required to consider the nature of the tasks to be taught in considerable detail. This enables them to plan effectively to meet the learning needs of the student with difficulties, but also makes them more aware of the teaching and learning process as a whole. Teachers who differentiate effectively to provide activities that are suitable for students with learning difficulties often find that other students also benefit from these activities or the teaching approaches adopted by the teacher. In some instances, where teachers are required to task analyse the activities to be presented in class and to break down teaching into more discrete steps, this enables other students to gain greater insights into those skills, knowledge and understanding being presented by the teacher.

Some teachers and parents express concerns that having students with special educational needs in classrooms will detract from the learning of others. In well organised inclusive classrooms, where teachers have a commitment to assessment for learning, well differentiated planning of lessons and careful management of resources this has been shown to be a false anxiety (Rouse and Florian, 2006). However, the proviso within research in this area relates to the need for schools to be committed to inclusive education and to adopt those practices that encourage the effective learning of all students. Until such an approach becomes the norm, schools are likely to struggle to meet the needs of a broad and diverse population. Where these practices become embedded within classrooms it has been shown that all students benefit from an inclusive environment. The best examples of this are to be seen where teachers have a commitment to mixed ability grouping. In these situations the most able students often find themselves working in a peer tutoring role in support of those who are experiencing difficulties. When performing such a role they are required to explain processes and learning content to their peers. When this happens they are placed in a position of having to think carefully about the subject of the lesson and thereby increase their own understanding. In these mixed ability situations the least able students are able to move forward with the support of others who become effective role models. They will also often be prepared to ask for explanations from their peers in a way that they might not from the authority figure of a teacher. Hence, in mixed ability situations all students have an opportunity to benefit and to learn from each other.

CHAPTER SUMMARY

Within this chapter we have attempted to present a case for the relationship between inclusion and assessment for learning. We would argue that assessment for learning is an inclusionary process that recognises individuality within a whole class teaching context. Teachers who are committed to assessment for learning must of necessity recognise individual learning needs and shape their assessments and planning accordingly. For many teachers and school policy makers this demands a realignment of teaching and learning strategies within schools and is not likely to be quickly achieved. However, for those who are prepared to invest the time in making changes to teaching and learning processes, to see assessment as an integral rather than additional part of teaching and to recognise individual learning needs, the opportunities to develop more equitable educations systems are considerable. Such changes will require time and a willingness to interrogate and debate current teaching practices and school provision. It is hoped that this book may make some small contribution to assisting those who are willing to engage with the debate.

CHAPTER 3

FORMATIVE ASSESSMENT: ASSESSMENT FOR LEARNING

Assessment for learning brings us into the classroom. It has become the object of increased interest in recent years with an abundance of books on formative assessment now available in many languages. Researchers have published studies which provide new evidence to formative assessment as being successful in improving students' learning outcome (Wiliam, 2012). In particular the work of two UK based professors, Paul Black and Dylan Wiliam, has assisted in defining formative assessment "as encompassing all those activities undertaken by teachers, and/or by their students, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged" (Black and Wiliam, 1998, p.7). Some researchers have added that it is not sufficient to provide information, but that it is also necessary that the information is acted upon, preferably directly while the learning is taking place. An OECD study has later defined formative assessment as the "frequent, interactive assessment of students' progress and understanding this in order to identify learning needs and adjust teaching appropriately" (Looney, 2005, p. 21).

Formative assessment is considered a to be a tool; a part of the teacher's toolkit that is applicable whenever teaching or learning can be improved. Essentially it is part of the on-going process of teaching and can be used in a variety of ways, as a tool for the students to enhance their learning, and a tool for the teacher to diagnose her students' learning needs and the success of her teaching. In this book we aim to offer readers a new perspective on an existing tool, testing and adapting that tool to move students closer to self-reflexivity. Teachers need to understand what kinds of things stand out in their minds as learning aids, obstacles and tensions in an inclusive classroom where optimal learning for all is the ultimate goal (Hessler and Taggart, 2011).

It is important to recognise however, that these definitions of assessment do not explicitly specify who is considered to gather the information, or to whom the information is to be given. Within the formative assessment "movement" it has been increasingly accepted that not only the teacher, but also the students themselves must gather information, reflect upon it and use the information to improve their learning activities. At the same time, one must bear in mind that the students' understanding, as it is revealed through their work, represents one kind of feedback that the teacher may act upon and change her teaching accordingly.

ASSESSMENT FOR LEARNING

Assessment for learning is about how teachers assess their students' competence, progress and learning needs. But this explanation is not sufficient to understand the term. One cannot understand the term "assessment for learning" before one recognizes a wider implication and appreciates that it is a didactic perspective which integrates good teaching and quality assessment practice. It is about how to improve teaching in regard to the learning culture of the classroom and the students' learning outcome. It describes a certain kind of didactic practice which intends to improve both the teacher's ability to adjust teaching to her students' learning needs, and the students' thinking and learning strategies in order to become more competent learners. Assessment for learning is, as Black and Wiliam put it, "at the heart of effective teaching" (Black and Wiliam, 1998).

In Great Britain at the end of the previous century, a group of professors in education from Scotland, England, Wales and North-Ireland formed a partnership called the Assessment Reform Group (ARG). Their work has resulted in extensive research, literature and conference notes that have become the foundation of what formative assessment and assessment for learning is all about. They focused on assessment as

an on-going process usually performed in the classroom, and defined assessment as '*the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there*' (ARG, 2006).

As we can see from this definition assessment for learning is explained as a process in three stages. The first stage is to establish what the learner has learnt so far on his route to attaining the learning goal. The second stage is to make sure that the learner knows and understands the learning goal, and the final step is to decide what strategy to use or to define what route once followed is likely to lead to a successful outcome. Hattie (2009) uses the concepts feedback, feed up and feed forward to describe these stages.

Traditionally assessment has been seen as an incident with a clear beginning and end which takes place at different times and often outside the classroom. It has not been common to understand assessment as a process. This is an important point, due to a process being interpreted as an on-going activity, something that may take place from the very beginning, from the time the lessons are being planned, and does not actually end before the final examination or when the subject is no longer taught.

At first sight the first stage in the definition above appears to be synonymous with summative assessment, but there is a slight, but an important difference. While summative assessment is meant to be within the teacher's control and focused upon what the students have learnt and not learnt so far (assessment of learning), and does not necessarily have any further value, the first stage in the definition of assessment for learning includes a clear intention of providing the information necessary for giving the students optimal feedback. The questions posed may therefore be of a different kind, more diagnostic than the questions in a summative test. Furthermore the results are meant to be used constructively, they should lead either to different approaches to teaching, to effective guidance that motivates the students, or to the use of different learning strategies or resources.

The assessment for learning process is characterised by the following:

1. The information acquired will help teachers help students to take the next steps in their learning.
2. It will help students help each other to take the next steps in their learning;
3. It will help students help themselves to take the next steps in their learning

(Wiliam, 2011)

Furthermore the Assessment Reform Group goes on to state ten principles that assessment for learning is founded upon. Assessment for learning then:
- is part of effective planning;
- focuses on how students learn;
- is central to classroom practice;
- is a key professional skill;
- is sensitive and constructive;
- fosters motivation;
- promotes understanding of goals and criteria;
- helps learners to know how to improve;
- develops the capacity for self [and peer] assessment;
- recognises all educational achievement.

(ARG, 2006)

In the following chapters we will look into these principles, didactic elements and actions more closely. But first we will present a challenge to the veracity of the opposite of assessment for learning, assessment of learning.

SUMMATIVE ASSESSMENT ASSESSMENT OF LEARNING

All teachers are experienced in summative testing, both at the receiving end as students in primary and secondary schools, as well as in their teacher education, but also as assessors of students' work in their classrooms. Most teachers will have experienced that summative testing is not a crucial factor in achieving a better learning outcome for their students. Some will also state that it takes the focus away from learning goals and the acquisition of effective and varied learning strategies. It may in fact be a distraction from learning and an impediment to effective teaching. Quite often the students of these teachers have experienced that there is no time allotted to improve their competence when the tests have been corrected and returned. Tests are usually given at

the end of the topic that has been taught, and often returned some days later, when the class is well into a new topic. Winne and Butler (1994) explained feedback as "information with which a learner can confirm, add to, overwrite, tune, or restructure information in memory, whether that information is domain knowledge, meta-cognitive knowledge, beliefs about self and tasks, or cognitive tactics and strategies (p. 5740).

Feedback has probably very little effect if the students are not given the time and possibility to act upon it. No wonder then, that the teacher's comments that often are written in the tests when they are returned have little value, that suggestions on how to improve are not acted upon, and that most students pay little attention to the comments. What seems to be important for many students is their relative standing in the class. They compare marks with each other, and are more occupied with checking their peers' marks than how to improve their own work. In this book we argue that students should not be compared with each other, but assessed according to their previous attainments and to in relation to what remains to be learned if they are to achieve their learning goals.

Summative tests are associated with marking. Historically, students in all countries have been given marks with the intention of telling the student and his parents how he has performed, what his learning outcome has amounted to so far. In some countries, such as the England, the marks awarded for end of year tests are used to make comparisons of the performance of individual students across schools and thereby to judge the effectiveness of teaching. Marking student work is of obvious importance for students, their parents, and at graduation also for schools, universities and employers that are to decide which students to accept onto courses and which potential employees to employ.

The process of marking is not a scientific act however. There are lots of flaws in the process. Competence is probably too complex a concept to be measured in a traditional test, and the knowledge and sometimes abilities that are tested are not exact measures and cannot predict how successful they will become as university students or employees.

There is also a question of how competent teachers in general are to construct valid tests; tests that when assessed will give the best possible information about the student's abilities, knowledge, skills and understanding. An analysis of the tests given to students during a course will often show that the questions given are arbitrary in nature, and very often at a low taxonomical level. The students are most often asked to repeat what they have read in their textbooks or heard from the teacher's mouth. Questions that require higher thinking skills, show ability to solve mental problems, to generalise learning or those that are meant to engage the students in creative thinking, are not common. This is especially true when the questions are given in multiple choice tests, which have three or four alternative answers, but only one which is correct. It is argued that this kind of test does not measure knowledge, abilities or competence, but simply the student's ability to memorize the texts from his textbooks. We would also argue that an extensive test system based on multiple choice tests prevents the students from using reflective thinking, as the correct answers quite often cannot be found through logic deduction (Stobart, 2008).

One important aspect of summative tests is the issue of motivation. We know that if students receive good marks on tests, they are likely to enjoy being tested, as the results contribute to strengthen their self-confidence and self-esteem. However, quite a large proportion of the students receive mediocre or even poor results, some of them despite serious engagement in test-preparations. For students who have learning difficulties or may have sensory impairments that cause difficulties in accessing tests , this process may well put them at a disadvantage and affords them little opportunity to demonstrate their abilities. There is overwhelming evidence that the majority of these students are being demotivated by testing and marking (Harlen, 2006). Thus testing will prevent these students from developing an eagerness to learn. For them the test system too often removes the joy that should be part of learning, and it quite often results in negative attitudes towards the school.

In extreme cases summative testing may lead to exclusion from school. Students from deprived areas or families with no academic background, or those with diagnosed special educational needs tend to perform lower than their peers unless they are given individually adapted guidance and support. If the school system does not allow the complete age

cohort to move on to the next year group, and base the selection on exams and marks, those students who are held back will most often be among those who will suffer the most. They often demonstrate low self-esteem and their personal motivation for learning declines. Summative assessment alone does not address the students' learning potential. Great injustice may therefore be done to low-achieving students who are kept back and deprived of an opportunity to maintain peer relationships and demonstrate where their true learning strengths lie.

CREATING THE ESSENTIAL CONDITIONS FOR ASSESSMENT FOR LEARNING

Educating children has other goals than acquiring knowledge and skills. But it is impossible to ignore the fact that learning is an extremely important role of schooling. One should therefore explore all possible routes towards effective learning and avoid activities that do not promote or even prevent learning. When there is considerable evidence that summative tests demotivate a large proportion of the students and result in inefficient use of the time allotted to teaching, they should be avoided. There is hardly any research evidence that concludes that testing leads to long-term skills or competence, but there is an abundance of research that gives evidence that formative assessment is beneficial with regards to learning outcome (Black and Wiliam, 1998; Black et al., 2003; Hattie, 2008).

In order to make assessment for learning work in the classroom there are five conditions that should be deployed to promote its success (Engh, 2011). The teacher must:
1. Show a deep understanding of the professional competence that the curriculum aims to achieve
2. Have a clear focus on learning
3. Know how to develop good relations and positive interactions in the classroom with all students.
4. Know where the students are in their learning
5. Know how to guide the learning of every individual student forward

1. THE TEACHER MUST SHOW A DEEP UNDERSTANDING OF THE PROFESSIONAL COMPETENCE THAT THE CURRICULUM AIMS TO ACHIEVE

All over the world the teachers use textbooks as foundations of their teaching. Quite often the textbooks either represent the syllabus – what is expected to be learnt – or they actually are the syllabus. Sometimes the textbook represents the most important resource that is being used, but is not meant to be a concrete manifestation of the syllabus, and in very few cases the textbook is just one of many resources that the teacher may or may not use.

Textbooks may hamper the development of assessment for learning if used incorrectly. Textbooks are very often too detailed in their structure; and they often leave very little to the student's cognitive creativity. In many instances they are written in language that is inaccessible to students with learning difficulties and act as a barrier to successful learning. The representation of the curriculum plan is as it is seen and interpreted by the authors. A professional and experienced teacher may interpret the curriculum differently from one who is new to the profession. She may have ways of teaching that suits her personal styles better and also benefits her students more compared to teachers who consequently follow the textbook's progression and its allocation of space to the different topics and problems that comprise the subject. It is therefore necessary that the teacher is aware of her freedom of space, a kind of freedom that the experienced teacher knows how to make the most of to the advantage of her students.

The exercises that are given in textbooks are often in concordance with the detailed reviews of the subject matter in the same textbooks. The exercises may very often limit the students' possibility of conceiving the whole picture, of wholeness and coherent entities, and of a broad understanding of the subject's central topics. Too often the textbooks' questions, which the students are supposed to answer, are factual, the answers are already given in the text. It is a test

of the memory instead of the ability to reflect, consider, compare, assess or to stimulate creativity. According to cognitive taxonomies, for example that developed by Benjamin Bloom, repeating, recalling or copying what you have read or heard is the simplest form of knowledge. Real competence includes abilities such as doing independent work, cooperating in group activities, problem solving and executing ethical conduct. Answering simple questions, memorizing texts or solving tasks which do not require high thinking skills do not promote the kind of competence that is expected and is necessary for the development of independent inhabitants of a modern society.

Working towards a constant increase in the students' competence is not a small and negligible process. In order for the teacher to give her students' optimal feedback it is necessary to understand her students' competence and abilities and understand his immediate learning needs. This will not be possible if the students' are not challenged to work to their potential, if they are not given exercises that require joint activities and higher thinking skills. The teacher needs to listen to her students' expressions of thought, communication with their peers, and suggestions of possible solutions to their joint problem solving. The exercises that the teacher provides her students with must stimulate an active, cooperating and communicative learning environment. It may be necessary for the teacher to construct these exercises herself, they are unfortunately rarely found in her textbooks.

A very good way to achieve such a learning environment is to use similar exercises to those which in Queensland, Australia, are called Rich Tasks. The learning outcomes of students who work on Rich Tasks are explained as the outward and visible sign of student engagement within Queensland's curriculum framework. They are the assessable and reportable outcomes of curriculum plans that prepare students for the challenges of life in 'new times. We shall not explore rich tasks to any extent in this book. However, it is important to recognise that the central principles behind rich tasks are that they should include training to use a varied set of competences, that they are designed to be effective paths towards the desired knowledge and competence, and that they stimulate communication and cooperation between students. Rich tasks facilitate adapted work with a complex group of students in an inclusive classroom.

Learning outcomes from rich tasks are not based upon the ability to reproduce the facts or the outlines and conclusions that are expressed in textbooks. The outcome should be a demonstration or display of mastery; that is, students display their understandings, knowledge and skills through performance of activities that have an obvious connection to the outside world (Queensland Directorate of Education, Training and Employment, 2010). The teacher's presence and guidance when her students are performing their activities will provide her with the most elaborate portrait of student achievement and enable her to assess her students in the most fruitful and effective way.

2. A CLEAR FOCUS ON LEARNING

Most teachers will probably affirm that they have a strict focus on learning in all lessons. Yet, Norwegian research shows that this is disputable, as up to half the time students in classrooms are occupied with activities that are not directed towards the learning goals in the curriculum. This is not always due to the teacher, but the teacher at times may be part of the problem. This is especially true if the teacher does not manage to motivate her students to engage themselves in their own learning, or if the teacher lacks some of the skills necessary to manage her classroom, or does not have sufficient understanding of the learning needs of specific individuals.

Classroom management is about meeting precisely the needs of all learners in the class and so not to throw away valuable minutes of the lesson. It is about getting the class' attention when the lesson starts, it is about giving instructions which leave no doubt in the students about what is planned for the lesson, and it is about dealing with disturbing activities and behavioural problems. In a manner of speaking it is about using the time as effectively as possible, while at the same time communicating her genuine wish to help her students in their learning. If the teacher is a good role model, if she is able to make her students understand the importance of spending their time on learning, there is a great chance that the students will accept their roles as learners and be motivated to work efficiently.

In every classroom there will be students who engage in activities that impede their own learning and that of their fellow students. The way the teacher acts to solve this problem will partly determine how effective the lesson will be with regards to the students' learning outcome. Where teachers regard individual students as the problem, rather than recognising that the learning environment, resources or pedagogical approaches adopted in the classroom may be at fault, they are unlikely to succeed in addressing the needs of the whole class. If the teacher delays her actions to stop the unwanted activity, or put into place essential changes to the teaching process the behaviour may turn into such a problem that it takes a lot of the teacher's time and energy to make it stop. What is probably worse is that it diverts the other students' attention away from their work. It is therefore necessary to know what triggers the unwanted behaviour to begin with and to avoid as many of these situations as possible. Much negative behaviour emanates from student boredom or lack of understanding, issues that can be effectively dealt with when the principles of inclusion and assessment for learning are consistently applied. It is clearly an advantage if the behaviour can be stopped at the outbreak, because it is probable that it requires less time and effort and creates less noise at this point. If the teacher manages to stop unwanted behaviour while at the same time addressing the class and keeping the class' attention to their work, she will succeed in her undertaking to contribute to her students' deeper understanding that prioritizing learning activities are more important than focusing on disturbing behaviour. Furthermore, she will command the respect of the whole class and be respected for her appreciation of the needs of individual learners within a whole class situation.

Having a clear focus on learning is not only necessary to optimize learning outcomes, but also to have the time to supervise and guide each student in their learning and to monitor their progress. In a traditional classroom where the central focus point is the teacher, many students will not be able to concentrate on the teacher's information or their learning task when it either exceeds their competence or is estimated as dull and meaningless. A good teacher knows how to motivate her students and direct them to engage in active learning tasks that require communication and cooperation. This makes the learning more effective, more time is spent on learning; less time is spent waiting for the teacher, looking out of the window, checking into Facebook or Instagram or simply letting their mind drift elsewhere. And as important with regards to assessment, it contributes to the learning environment that opens up to quality assessment, whether this is self-assessment or that carried out by the teacher or peers.

3. DEVELOPING GOOD RELATIONS AND POSITIVE INTERACTIONS IN THE CLASSROOM

A positive learning environment may be characterized by students that are motivated, communicating, cooperating, actively engaged in problem solving activities and conscious of their learning goals and to what possible learning strategies that can lead to successful results. Such an environment also fosters respect for difference and individuality and recognises that achievement, progress and attainment will be at different levels for each student. The teacher's role is to lead and monitor her students' activities, to promote respect for individuality and to provide the information and learning resources that support the process towards a high degree of achievement.

Traditionally life in classrooms revolves around the teacher. She is the focus of attention; she provides the necessary information related to the textbooks and the subject matter, she decides what tasks to work on and controls her students' behaviour. This has been the accepted image of a good teacher that persists to this day and for the general public and many within education is what teaching and classroom management is all about. Such a narrow view of teaching and learning needs to be challenged and does not sit well with the authors of this book.

Modern education is challenging this traditional view. The teacher is no longer seen as the sole contributor to the learning process, and the textbooks are gradually taking on another function than providing the knowledge that the students are supposed to recall. In some subjects the knowledge development proceeds faster than the pace that textbooks can possibly maintain. The students are no longer seen as

passive recipients of information, and no longer the obedient performers of what the teacher instructs them to do.

There are many reasons for this alteration. One is a general trend towards democracy in modern societies, democracy that includes the notion of participation, inclusion and co-determination. As we want our children to know the basic ideas of their human rights in a democracy, it is necessary that they experience some of these rights in the classrooms. At the same time, teachers are recognising that the attitudes they promote towards students who have traditionally been marginalised will be influential well beyond schools. Students who learn positive attitudes in schools will generally carry these forward into their post-school lives.

Another reason for this development is the understanding of how learning actually takes place, and what are the conditions that promote learning. We know for example that it is not possible to compel a reluctant person to learn, we know that force indorses resistance, and we know that language and communication are basic parts of thinking and learning. A good learning environment then is a place with positive attitudes to learning and peers, it is active and communicating, and it includes a professional teacher who is aware of these facts. Students tend to see good teachers as persons who are able to impart their understanding and help them to progress in their learning. In some instances this will require that teachers are flexible in their use of a variety of communication media and adaptable to the learning demands of individuals.

Basically creating good relations is about developing a positive learning environment and to guide and monitor the students' learning processes in the most beneficial way. When the students experience the teacher as one who wants nothing but the best for them, it is very probable that they will act according to her expectations and concentrate on their learning tasks. Positive relations between the teacher and the students will again promote good relations between the students, but it is not a sufficient variable. In addition the students must get to know each other, they must experience the advantages of cooperation, they must understand that they can exceed their performance when they work cooperatively, and also experience the joy of contributing to their peers'

learning. A good teacher will know how to initiate these kinds of learning activities.

The teacher's role is due to change. It will take time; it requires an accomplished teacher to understand the principles of modern education and transfer some of her instructional power to her students. She must not only know the factors that promote empowerment and independent learners, she must also dare to redefine her role in the classroom, leave more decisions to her students, decisions that concern learning goals, assessment criteria, working methods and student cooperation. It involves giving tasks that encourage higher thinking skills and trigger curiosity, tasks that motivate the students to solve the professional problems they encounter when they engage in cooperative learning.

4. THE TEACHER MUST KNOW WHERE THE STUDENTS ARE IN THEIR LEARNING

There are numerous ways for the teacher to collect evidence of the students' knowledge, abilities and competence. This is an on-going process, any interaction between the students and the teacher will contribute to her understanding of her students' abilities, needs and competences. Discussions and dialogues between the students and the teacher as well as between the students themselves help to clarify her insights of the students' learning. In the classroom she will ask questions and listen to the answers she gets, she observes the students' activities, listens to their suggestions and ideas and reads their written work.

This is traditionally what all teachers have seen as the main point of assessment. Finding out what the student knows has been the essential focus of tests and exams, activities which often take place in school. Both homework and tasks carried out in class have given the teacher additional information about her students' knowledge and mastery. It is essential to recognise that formative assessment adds something new to this very important task.

To find out what the student knows is a question of understanding knowledge, or actually understanding the relations between knowledge, ability and competence. Most learning goals in a modern curriculum are about developing

competence, while testing traditionally has been about remembering what is written in the textbooks, or the standard procedures of solving math problems. Competence is a difficult concept. It has probably as many definitions as there are researchers who have tried to define it. It includes elements like knowledge and abilities, but this is not enough to explain the term. It involves the ability to transfer what is learnt in one context to another, but it also involves how what is learnt is being used in new and so far unknown situations. Competence also includes a personal element. A person will be more competent in solving problems in a field where he has a genuine interest, the interest triggers more energy that can be used to solve the problem (Jensen, 2002).

As we can see, testing a student to determine his competence is not an easy matter. Teachers will not have the required competence and the necessary resources available to test their students' actual competences. Instead she will be forced to test rather limited knowledge and the ability to use certain methods as long as a written test is the tool she has to establish her conclusions.

What formative assessment adds to this practice is an appreciation that establishing an understanding of the student's mastery is not an end in itself, but a way to provide a basis for further development. The intention is that these procedures should help to disclose the students' learning needs and thereby aid the teacher to guide their further learning activities.

Benjamin Bloom is well known for his cognitive taxonomy which explains different levels of knowledge. His taxonomy has been revised by Marzano and Kendall (2007),who I state that the lowest form of knowledge is copying, recalling and remembering. Their revision of Bloom's original taxonomy looks like this:

FIGURE 1. The revised cognitive taxonomy. (Marzano and Kendall, 2007)

The point we would like to make is this: If we want to encourage our students' higher thinking skills, we must encourage them to apply their knowledge to practical or recognizable situations, to analyse explanations, concepts, texts and tables, evaluate texts, methods, ideas and learning strategies, and most of all: The students should be encouraged to create their own solutions, to follow their ideas in theory and practice, to engage in creative writing, to discuss and suggest possibilities and to be creative in art. The aim must be to educate the independent and self-regulated learner.

If this is done, the teacher's judgment about students' competence will be more valid, it will lead to a focus on higher and more valuable skills, and it will provide her with the best possible understanding of the students' learning needs. In short, the students' competence becomes visible in a way that makes her able to assist them in their further learning.

5. THE TEACHER MUST KNOW HOW TO GUIDE THE STUDENT'S LEARNING FORWARD

All teachers want their students to learn more and hopefully to do their best to improve their learning. The feedback that students receive is decisive for their learning. All over the world teachers point not only to what their students have mastered, but to their students' flaws and mistakes. The students' learning needs seem very often to be less heeded; it is as if we believe that the students can move on in their learning without anyone telling them how to do it. We have to realize that telling the students what they have not mastered so far is hardly of any value to them in their further learning activities; it may even eradicate their motivation to improve.

Feedback then has a tendency to point backwards, to what already has happened, to what the students already have learnt within a certain period of time. Unfortunately there is no noun for "feeding forward" in the English language, maybe that is one of the reasons that feedback usually is given as a message that merely points backwards to what has happened or what has been accomplished so far.

This feedback is often given when the teachers have started a new topic and the students work on new tasks to which the given feedback has little or no relevance. If the students are not given time and assistance to gain a better understanding where their work or tests show this is needed, the feedback has even less effect.

Formative assessment implies that assessment must lead to a change. The change may be exploring a more effective learning strategy, examining some new information or any new thoughts, ideas or strategies that lead to improved understanding and reflection. It must also provide a focus upon the process of teaching and assist teachers in understanding how they may modify their practices for the benefit of all their students. The teacher's main challenge is to use the information acquired about her students' learning to help the students to be aware of the learning goals and to how they can achieve those goals. If the teacher succeeds in doing this, the students will increase their motivation and learn more. One essential factor that vouches for the teacher to succeed is to be aware of how the students assess their own work. When this is made explicit, it will be possible to avoid misunderstandings and to build further comments on the students' own opinions.

The International Bureau of Education (IBE) is an organization that aims to improve education internationally. The statements IBE makes to improve teaching are closely related to the importance of giving the kind of feedback that moves learning forward as in assessment for learning. We shall give an account of some of these points here in order to illuminate this consistency and will elaborate many of these points in later chapters.

- *Active participation is a must for advanced learning.* The students must discuss the subject matter and the tasks given, they must be able to try out different strategies and to carry out experiments. Rich tasks, peer assessment and the use of talking partners (explained later) are examples of how assessment for learning has put this extremely essential point into practice. The IBE expands this point to also encompass social participation, which is also a part of the assessment practice referred to above.

- Another important point for the IBE is that *the activities that students engage in within the classroom must be meaningful.* The students should know that the activities will contribute to develop the expected competences; they should understand why the goals are important, see the connections to other parts of their knowledge, and be convinced that they are able to successfully pursue the learning goals.

- *The students must learn how to apply different learning strategies.* Different subjects, different forms of knowledge and different tasks require a set of manageable learning strategies. Assessing learning strategies and their effectiveness is also a part of assessment for learning.

- *The students should be trained to become independent learners.* They should be able to decide on personal learning goals, and how they can be achieved, but still ask and take advantage of persons with more knowledge and competence than themselves. They should be allowed to cooperate with their peers, and even take the initiative

to cooperative working methods. Independent learners will know how to decide to what extent the learning goal is achieved, which is what happens when students are invited to discuss assessment criteria and indicators of success.

- *The students should be involved in learning activities that promote high thinking skills,* they should expand their competence and understanding, and they should not experience schools and learning as memorizing facts from textbooks and copying methods taught by the teacher. They should be stimulated to use their reflective abilities to transfer knowledge from one field to another, an act which also is incorporated in the concept of meaningful feedback.

- *Adapted teaching and differentiation.* Student participation through self-assessment and peer assessment supplies the teacher with information that helps to adapt her teaching and tutoring to a variety of student needs. When students decide on personal learning goals and communicate what they have learnt, the teacher will acquire information that can be used to encourage the students to explore and critically reflect upon their goals and the strategies they use to achieve them. This is essential for teachers who work in inclusive classrooms.

- The IBE strongly emphasizes the fact that there is a *close connection between motivation and learning outcome.* When assessment for learning is carried out in a good way the students will experience increased motivation. Being part of an active community of learning is an important environmental factor that will increase motivation to learn.

CHAPTER SUMMARY

In this chapter we have been concerned to establish principles that will be exemplified in the later chapters of this book. The main points may be summarised as follows

1. Formative assessment and assessment for learning can be explained in different ways, but all explanations have a clear focus on assessment as a process that moves learning and teaching forward.
2. In order to develop a formative assessment culture, the teaching methods must make provision for adequate feedback. The teacher should:
   1. Comprehend the competence the curriculum aims to achieve.
   2. Have a clear focus on learning
   3. Know how to develop good relations and positive interactions in the classroom.
   4. Know where the students are in their learning
   5. Know how to guide the student's learning forward

CHAPTER 4

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WHY DOES ASSESSMENT FOR LEARNING WORK?

It has long been established that teaching and learning that is interactive and encourages student initiative and a degree of autonomy is highly effective (Beuhl, 2009). Communication, thinking and re-thinking are essential components of effective learning. These processes always take place within a culture established by teachers and within schools and learners are strongly influenced by this culture. The assessment practices established by schools influence and inform an essential part of the learning culture in the classroom. The learning culture that is developed in a classroom is therefore not merely important, but crucial for the learning that takes place.

Teachers need to know about their students' progress and difficulties with learning so that they can adapt their guidance to meet their needs - needs which are often unpredictable and which vary from one student to another. Teachers will often encounter students who challenge their normal approaches to teaching. It is far more likely that teachers will be able to adjust their teaching style than it is that they would be likely to change the individual student. Attempts to simply fit a student to the teacher's preferred approaches are often seen to fail because of a refusal to recognise that whilst most students have the ability to learn they need to find their own approaches to becoming effective learners (Jones, Fauske and Carr, 2011). Recognising this individuality is an essential component of being a successful teacher. Teachers have an infinite number of possibilities to disclose useful information, from verbal, physical and written activities. New Zealander, John Hattie, has applied the concept "visible learning" to teaching activities. When the students through their talk, their verbal discussions and problem solving as well as their written work show the teacher their thinking skills, their use of learning strategies and their use of professional language, their learning in a sense becomes visible for the teacher. In in-

clusive classrooms teachers need to recognise that students may demonstrate their understanding and knowledge in a range of ways. For example, whilst the teacher may require that most of the class write a brief essay to demonstrate their understanding of an aspect an historical event, she may accept that a student who has literacy difficulties either produces a story strip or makes an audio recording to demonstrate his knowledge. The teacher here is concerned to assess the student's understanding of the historical event, not his ability to write. Having a high level of literacy is undoubtedly an advantage, but having a lesser ability in this area does not prevent a student from displaying knowledge and understanding.

In Black and Wiliam's paper, "Inside the Black Box" (1998) the term 'assessment' refers to all those activities undertaken by teachers, and by their students in assessing themselves, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged. *They claim that such assessment becomes 'formative assessment' when the evidence is actually used to adapt the teaching work to meet the needs.* This is what formative assessment is about, providing information or evidence that is used to benefit the learners in their pursuit of educational goals.

This concept is nothing new. All teachers assess their students every day and in every lesson whether through formal or informal means. Still, the teacher's assessment is not always used to enhance the students' learning, or not always used to change the teacher's instructional methods. Students often say that the teachers too rarely tell them how to improve, and too rarely show them what quality work is like. Where assessment for learning takes place, the teachers do their best to ensure that students have a specific knowledge about the learning goal and receive the most helpful guidance on how to attain that goal. For some students who have difficulties with learning this may entail providing them with clearly ex-

pressed goals in written form that they carry with them as an aide memoir from lesson to lesson.

In the above mentioned pamphlet of Black and Wiliam they raised the following question:

IS THERE EVIDENCE THAT IMPROVING FORMATIVE ASSESSMENT RAISES STANDARDS?

Clearly, as authors of this book we certainly believe that this is the case. Their conclusion from the reviews of around 200 research papers is that the answer to this question is a clear 'Yes' (Black and Wiliam, 1998).

When teachers are supervised and encouraged to develop certain practices that create a formative assessment culture, the learning environment in the classroom is likely to change. In a classroom where the teacher has integrated assessment for learning in his everyday teaching practice, the students will be engaged more actively in learning and assessment activities. In order to do this, they need to be provided with feedback that promotes further learning. This is not merely being done by means of the teacher, but as active participants the students themselves produce useful feedback by reviewing their work and that of their peers in the light of transparent assessment criteria. The criteria are indicators of success, but also indicators of what to do or focus upon when the learning goals are not yet quite met. This incremental approach to attainment of learning goals is important. For some learners a learning goal may appear too far removed from their current abilities and therefore unattainable. Where there are well defined increments towards a goal this makes the task more realistic for such students. Indeed, the task analysis of learning goals has been a long established and proven approach to supporting the learning of students with special educational needs (Courtade, Browder, Spooner and Dibiase, 2010).

Several researchers and practitioners have theorized why formative assessment works. Many point to Vygotsky and his notion of scaffolding (Vygotsky, 1978). Scaffolding may be performed by both teachers and peers. Learning takes place, according to Vygotsky, when the learner is participating in activities with the support of one or several participants who are either more competent or knowledgeable, or have different

competences than the learner. In the classroom the teacher and peers may serve as the assisting participants. By communicating their understanding, ideas and views, learning will take place in all parties.

Using summative techniques teachers who deploy Vygotskian approaches are able to assess their students' Zone of Proximal Development, which according to Vygotsky is the true range of skills and knowledge that a student possesses. Th Social-Cognitive Learning Theory is complementary to the concept of scaffolding, suggesting that simply giving a right or wrong answer is not sufficient (Bandura, 1986). Instead, reflection on the error and the strategy that was used when the poor results were achieved, will lead to a better performance. Social-Cognitive Learning Theory differs from the behaviourist perspective, in which positive reinforcements like praise or good grades are supposed to increase performance.

Applying the Social-Cognitive Learning Theory when deciding which exercises to use with the intention of optimising students' learning, will initialize learning activities that stimulate meta-cognition. Meta-cognition involves thinking about concepts, possible learning strategies, what resources that are available to promote a successful result, and how previous learning experiences can contribute to solutions to a problem. In the classroom context, this could refer to students thinking through various strategies and what resources to utilize to complete an assigned problem or to explore a theoretical challenge (Zaff and Behre, 2003).

Consistent with Social-Cognitive Learning Theory teachers need to be proactive in their scaffolding of students attainments in the classroom. Students need to be given thoughtful feedback on all kind of responses, whether they seem out of place or intelligent. In addition it is necessary to be given the opportunity (which often means time) to reflect on the given feedback (meta-cognition). Better still if they can discuss their thinking as well as the teacher's feedback with the teacher to develop better skills and attain a more competent level of performance (ibid.). This takes time however, and it is impossible to expect that this can be done regularly in a classroom with 30 or so students. It is therefore necessary to activate peers to assist each other in this venture.

In concordance with these theories, Butler and Winne (1995) itemize some of the functions formative assessment can serve. They claim it may confirm or refine students' conceptual understandings that are consistent with relevant learning goals and also restructure students' conceptions if their beliefs are inconsistent with new information. Dialogical assessment can help teachers provide helpful feedback that will both motivate and guide students when new information to their knowledge is being added. Finally, meaningful formative feedback to the students' self-assessment can help teachers to refine their students' understanding, thus strengthening their performance and also provide the teachers with adjustments to their teaching.

CHAPTER SUMMARY

Effective teaching requires an empirical evidence base in order to be confident that the methods advocated are likely to be practicable within the classroom. In this chapter we have suggested that there is a good corpus of research evidence to justify the application of assessment for learning in schools. Furthermore, we would argue that teachers who adopt the principles of assessment for learning are more likely to address the needs of a diverse population of students thereby promoting a more inclusive approach to teaching and learning.

STUDENT PARTICIPATION AND INVOLVEMENT

We have already stated earlier in this book that we believe there is a need to develop effective teaching and learning partnerships that see the teacher and the student working together through processes of planning and assessment in classrooms. Students have a vested interest in becoming effective learners. Most enter school eager to learn and it is only when this process breeds failure that students begin to become disaffected with school. Maintaining student enthusiasm and focus is an essential part of ensuring effective learning. Where students perceive that teachers are making learning demands that are unattainable they become disillusioned and this can be a source of frustration which leads to behaviour difficulties and failure (Cefai and Cooper, 2010).

LISTENING TO STUDENT VOICES

Young people who have left school with few qualifications and poor experiences of schooling often express the view that their opinions were seldom sought and their ideas ignored by teachers (Shevlin and Rose, 2009). These young people generally recognise the need for teachers to maintain their authority in school, but also feel that they could have provided unique insights into their own preferred learning styles and those things that teachers did that either enhanced or inhibited their learning.

For students with disabilities or special educational needs the problems they experience are often associated with low expectations. Teachers do not listen to the opinions of students because they see the disability or learning difficulty rather than the individual. If a student has a label such as dyslexic or autistic assumptions are made that they will have limited understanding and that their ability to contribute to an evaluation of their own learning needs will be limited. The Encouraging Voices Project conducted in England and Ireland

sought the views of young people with a range of special educational needs and those from minority communities about their educational experiences. Many spoke about the low expectations that teachers had with regards to their abilities or their understanding of their individual learning needs. Expressions such as these offered below were common within the responses of these young people.

"No one expects us to do well in exams and go on to have a career or even a decent job. Changing this means challenging a mindset that sees the disability, not the person, and that fails to recognise that while it might take a young person with a disability longer to achieve their goals, we can still do it." (Student with a learning difficulty)

"I find it very patronising to be told 'you shouldn't do that because it's not for you and wouldn't suit you'. And 'we're really thinking about you, you know'. And actually it's not us that has to change. It's the environment that has to change; it's the exam system that has to change; it's the schools and the teachers that will have to re-organize themselves to allow young people with disabilities get a decent education." (Student with a physical disability)

These two examples from many that we could have presented demonstrate quite clearly that these are articulate students who none the less feel that their abilities have been ignored within the education that they have received. How much better might things have been for both them and their teachers had greater awareness of the contribution they might have made to their education have been in place?

There are many reasons why the views of students should be taken into account. Munby (1995) stated "I would like to suggest that we need to involve students in the assessment process not only because it is more likely to motivate them as learners, not only because students should be entitled to such an involvement, but also because, when done well, it can save the teacher time and make the process more man-

ageable.. Moreover, involving students in their own assessment is more likely to lead to accurate judgements about their attainments." Munby here is not simply making a statement about a student rights, but suggests that there are practical advantages in ensuring that students are fully involved in the assessment process. His views were reinforced in research conducted by Rose (1999) and by Rose and Shevlin (2006) who analysed the advantages of student involvement following a series of research studies undertaken over a ten year period. They observed that the student who is encouraged to make decisions about their own learning:-

• Makes collaborative decisions with the teacher
• Assesses their own progress
• Recognises what he/she is good at and areas of weakness
• Recognises personal improvement
• Is more independent in working practices
• Has a clearer vision about what might be achieved
• Feels valued and respected

These alone should provide an incentive for teachers to further consider how they might engage their students in the assessment process.

ENGAGING STUDENTS IN ASSESSMENT

There will always be a range of ways to practise assessment. Practise depends on the teacher's experiences, his beliefs, his imagination and creativity and also his attitude towards and expectations of students. An important factor is also his competence and trust in his students. But this is not all. Practice also varies according to the students' age, their experiences, their abilities and the degree to which they are allowed autonomy. The teacher who has trained his students well and believes in their ability to assess their peers and assist each other in improving their work will have a larger toolbox to choose from.

One of the main features in formative assessment practice is the students' self-assessment. Self-assessment is a powerful tool, The American psychologist Linda Bruce, expressed it like this: "Self-assessment is the most overlooked, yet possibly most valuable aspect of assessment for students at all levels and in all fields (Bruce, 2001)". According to John

Hattie, self-assessment seems to be the most effective single assessment activity that can be performed in a classroom. Self-assessment is actually the process in which the student gives himself feedback on his work. It is a strategy to enable students to 'learn how to learn' as a process in itself.

If you follow links to self-assessment on the Internet, you will find lots of recommendations on helping the student to mark his own work. Self-assessment in this book is not about marking. Self-assessment is enabling the student to reflect on his attainment, to assess the effect of his learning strategy, his way towards achieving the aim of the assignment, and what he can do to improve his work.

When assessment is embedded in daily classroom life, there are numerous opportunities to engage students in the assessment process. When students are collaborators in assessment, they develop the habit of self-reflection. They learn the qualities of good work, how to assess their work against these qualities, how to step back from their work to assess their own efforts and feelings of accomplishment, and how to set personal goals (Reif, 1990; Wolf, 1989). These are qualities of self-directed learners, as opposed to constantly being on the receiving end. As teachers model, guide, and facilitate practice in self-assessment, students learn that assessment is not something that is separated from their learning, not something that is being done to them. Instead they will experience assessment as an integral part of how they learn and improve, a practice that comprises collaboration between the teacher and the student. Self-assessment includes reflective activities in which students are incited to consider the strengths and weaknesses of their work and make plans for improvement. The teacher's challenging task is first of all to raise the student's competence to assess himself, then to furnish him with the necessary resources to do so.

To become capable assessors of their own work, students must have a clear perception of the learning goal. An understanding of the learning goal is to have an understanding of quality, as good learning goals are always specified as attainment of quality, whether the goal is to produce an object of art, a written task or an oral performance. A necessary part of training students to become good assessors is to enable them to tell the difference between an object of quality and

a poor or mediocre object or performance. Self-assessment gives the students an opportunity to correct or adjust their work before they finish it, it is therefore important that the teacher gives them time to improve it (Bruce 2001, Stiggins, 1997; Wiggins, 1998). We cannot expect that the students do this on their own.

A set of principles for the greater involvement of students in assessment and planning is essential if schools are to achieve consistency in the way that they manage this complex process. The following points were produced by teachers attending a professional development course related to assessment and student involvement in England.

- Conduct assessments regularly in order to identify student strengths, weaknesses and needs.
- Plan the pre-requisite skills to become part of teaching and everyday procedures
- Begin teaching these skills and involving students in decision making as early as possible
- Involve all school staff
- Involve parents/carers and in particular discuss the principles with them
- Make targets as visible as possible around the classroom as a reminder to students
- Provide means of celebrating student achievements on a regular basis

These principles establish a number of points that are worthy of some elaboration. In particular there is an emphasis here that assessment is an integral part of the teaching process and one in which teachers communicate their intentions to students and thereby identify those skills and understanding that the students will need to gain in order to make progress. There is also a recognition that partnership must extend beyond that established between teacher and student and should involve parents or carers in order that consistency might be achieved across the several environments in which the student operates. Constant reminders for students of what is expected in learning, and regular celebration of achievements, no matter how small is also emphasised and is seen as a means of respecting and valuing students.

Unfortunately students do not assess their own work just because the teacher tells him to. Self-assessment must

be learnt through practice. It is an act of reflection that high-achieving students may be quite capable of doing, while the students with low learning outcomes traditionally relies more upon the help from the teacher than his own assessment abilities. Less effective learners seem to employ minimal self-regulation strategies, thus depending much more on external help either from the teacher or a peer. They set out to solve the problems at a given time, but when they receive support seem not to incorporate feedback in ways that will improve their self-regulation strategies in ways which enhances future learning. This may well be a result of the teachers' doing, because it is probably easier to tell the low-achieving student how to solve a problem by giving him precise instruction, than it is to spend time challenging his reflective abilities.

CLEAR LEARNING GOALS

Clear goals for learning are probably a necessary requirement in order to ensure quality in education. The teachers should be very aware of the learning goals in the curriculum plans, but this is not always the case. "Neither teachers nor students can succeed without a clear vision of what students must know and be able to do, or without the ability to translate that vision into actions that result in high quality work" (Stiggins, 1997). In the beginning of a lesson, or preferably at the time when a new topic is about to be taught, the teachers should make sure that they have a clear goal in mind, and that this goal is communicated to the students, for example by writing it on the board. For some students the use of personal target cards that they carry around with them as reminders of their agreed focus can serve as a useful tool.

Some learning goals may be achieved in a short period of time, perhaps as short as in a single lesson. Most learning goals need to be worked on in a longer space of time. Learning goals that are meant to be dealt with during a week or even a month, are probably more advanced, more complex and more suitable for reaching a deeper understanding as well as learning for life. Teachers, therefore, should make sure that their students are provided with an understanding of long-term goals. These will, of course vary for each student and dialogue between teachers and students can be helpful when they focus upon the fact that individuals are likely

to learn at different rates. Education should be an enjoyable experience and not a race. This brings motivation and meaning into the learning process. It enables the student to understand why short-term learning goals and daily assignments are connected to a larger goal and have a long-term purpose.

SHARING ASSESSMENT CRITERIA (INDICATORS OF ACHIEVEMENT)

To attain learning goals, students must not only understand the meaning of their assigned learning goals, but also be able to translate them into assessment criteria that function as helpful guidelines for their learning activities. The process of leading students to express assessment criteria in their own words in terms of observable criteria will assist the students in their work. It leads to better perception of effective strategies as they will have specific, understandable, and appropriately challenging goals to relate to (Rolheiser & Ross, 2000). Teachers report that students like being involved in designing criteria, and also that students are capable of suggesting reasonable and sensible assessment criteria, sometimes criteria that the teacher herself had not considered. Allowing students to work cooperatively in these areas appears to help students internalize the criteria and feel more ownership of the assessment procedures. Recognising that for some students social targets may be as important as those of an academic nature may be helpful. For example, a student who has behaviour difficulties may have targets about sharing learning resources with their peers. Whilst a student on the autism spectrum who has difficulties forming relationships

may have a target aimed at increasing participation in group activities. For many students a combination of academic and social targets achieves a useful balance that can have a positive impact upon learning.

Linda Bruce states that resolving differences of opinion between students turned out to be a significant factor in one of her experiments. Especially physics students engaged in a lively discussion before arriving at consensus for the definition of a high-quality lab report. She concludes that almost all of the students that later were interviewed thought the discussions had been helpful. She reported that one boy had said, "I think all of us learned a lot from that, just because we had to work together and we all had to agree on it. And we had to piece it all together for ourselves instead of the teacher always doing it, and I think you learn a lot more by doing things yourself, than from just having the teacher do it for you." (Bruce, 2001).

CHAPTER SUMMARY

The participation of students in a partnership focused upon assessment for learning can have benefits for both students and teachers. Success in this area is dependent upon establishing mutual respect but also engaging in constructive discussion of individual learning needs. Such a partnership demands that everyone, including the student assumes responsibility for the teaching and learning process. The celebration of achievement and progress should be seen as a means of acknowledging successful teaching and learning on the part of both the student and the teacher.

DEVELOPING ASSESSMENT FOR LEARNING WITHIN AN INCLUSIVE CLASSROOM

An inclusive classroom is one in which all pupils are valued as individuals and where teachers plan their teaching to address the needs of all learners. Such classrooms are based upon a commitment of teachers to develop an understanding of their student's needs and to use assessment in a manner that ensures respect for the individual whilst having high expectations in terms of participation and learning outcomes. In order to achieve this it is important that all teachers interrogate their own work and establish practices that are supportive of learning for all. Loreman, Deppeler and Harvey (2010) emphasise the need for teachers to assess all aspects of their teaching and classroom organisation in order to promote inclusive teaching practices. They recognise that traditionally assessment has focused almost exclusively upon student learning outcomes and has in many instances become only a summative process. If the needs students who have difficulties with learning are to be met in the inclusive classroom it is imperative that those factors that impact upon these outcomes are also considered and assessed. We would suggest that this means that teachers need to view assessment in much broader terms and that an investigation of the influences of the ways in which teaching, outcomes, environment and resources combine to provide an effective learning experience for all students should be at the heart of developing inclusive classrooms.

Ashman (2012) has described a process of "responsive teaching" through which the teacher does not see teaching as a simple mechanistic approach to planning, delivery and assessment but rather as a dynamic activity that responds to needs of both individuals and groups of learners. He states that the key to achieving responsive teaching is through planning that involves:-

- Knowing each student's learning characteristics and capabilities;
- Focusing attention on the ecology of the teaching-learning environment that maximises physical and human resource; and
- Developing instruction styles and techniques that accommodate learner diversity.

(Ashman, 2012, P.83)

In Ashman's view there is a need to move away from a model of assessment that anticipates student "deficits" as a barrier to learning and to adopt a more ecological model that recognises a range of influences upon both the student and the ways in which teachers teach.

We would suggest that Ashman's more holistic view of teaching and assessment is helpful in promoting a debate about an inclusive classroom may be developed and assessment used to support the learning of all students. The approach that we describe within this chapter supports Ashman's concept of responsive teaching in ways that are both student centred and practical. In this chapter we will examine the ways in which the four elements of teaching, outcomes, environment and resources relate to each other and consider how teachers can initiate assessment in the classroom that is inclusive of all students. Figure 2 below suggests that teacher assessment needs to be continually flowing across the four elements of learning, teaching, environment and resources in order to attain a holistic view of influences upon the child that may promote or inhibit their attainment and achievement.

FIGURE 2. A focus for inclusive assessment

By using this proposed model the teacher recognises that the four independent elements of teaching, outcomes, environment and resources are interrelated and that a greater understanding of how each of these influences the child's progress can enable a more effective learning experience to be achieved. We would also suggest that this is a dynamic model whereby the teacher needs to examine the inter-relationship between these four elements rather than examining each in isolation.

Each of these elements will be examined here with the provision of examples of how they can be applied to promote the development of an inclusive approach to assessment. We will then consider the relationship between the four elements and the practicalities of their management in the classroom.
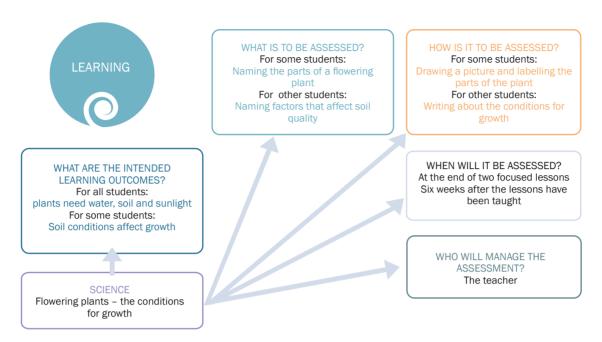
ELEMENT 1 – OUTCOMES

The assessment of outcomes has been a long established focus for teachers in traditional classrooms (Gross, 2002; Stipeka, Newtona and Chudgarb, 2010) and is the element with which most teachers feel confident and comfortable. A focus upon this element provides insights into the progress being made by the individual student and enables this to be compared and measured against that of his peers. Most assessments begin with the teacher asking questions. In respect of outcomes we propose that the following questions are helpful in enabling teachers to maintain a focus.

- What are the intended outcomes?
- What is to be assessed?
- How it will be assessed?
- When it will be assessed?
- Who will manage the assessment?
- What will be the advantages of the information gained?
- How will assessment inform future teaching and learning?

These questions focus upon the personnel involved in assessment, usually the teacher and the student, although in some circumstances this part of the process could also involve parents or other professionals who work with the student. The questions aim to provide summative information regarding the student's achievements and attainments and to provide formative information that can assist the teacher in planning the next stages of teaching.

This is best illustrated by following the example in figure 3 below. In this example we follow the ways in which a teacher may use these questions to assess the outcomes during a science lesson about flowering plants. In this lesson the teacher wants the students to gain an understanding of the conditions required for the successful growth of flowering plants. She has a class of varying needs and abilities and therefore needs to plan her assessment accordingly. The figure presented here indicates how she intends to ensure that her assessment of outcomes addresses the needs of the whole class.

LEARNING

WHAT IS TO BE ASSESSED?
For some students:
Naming the parts of a flowering plant
For other students:
Naming factors that affect soil quality

HOW IS IT TO BE ASSESSED?
For some students:
Drawing a picture and labelling the parts of the plant
For other students:
Writing about the conditions for growth

WHAT ARE THE INTENDED LEARNING OUTCOMES?
For all students:
plants need water, soil and sunlight
For some students:
Soil conditions affect growth

WHEN WILL IT BE ASSESSED?
At the end of two focused lessons
Six weeks after the lessons have been taught

SCIENCE
Flowering plants – the conditions for growth

WHO WILL MANAGE THE ASSESSMENT?
The teacher

The teachers first action is to decide the learning outcomes for her students. Because the needs of the individual students vary she recognises that not all students will work towards the same outcome. She believes that all the students need to learn that plants need water, soil and sunlight in order to grow successfully. This is the baseline of learning outcomes towards which she will work for the majority of her class. However, for some more able students she will expect them to understand how different soil conditions may support or inhibit the growth of the plants. During this specific lesson she will conduct two levels of assessment. For the majority of her class she wants to be assured that all of the students can name the main parts of a flowering plant, the roots, stem, leaf and flower. For the most able students she will focus her assessment on their understanding of the soil conditions that affect growth, such as moisture and nutrients. In order to conduct these assessments she will adopt two distinct strategies. For the first group, she will assess their ability to name the parts of the plant by asking them to draw pictures of a plant and to label the major parts. For a smaller number of students she will encourage them to write a short passage about

the necessary conditions for growth. An important part of the teacher's strategy is to make both forms of assessment available to all students. She expects most students to complete the labelling of flower parts assessment and only a few to do the writing. However, she will provide an opportunity for all students to do the written assessment if they wish and if she believes they have gained enough understanding to attempt the assessment. This is an important strategy because it ensures that she is not limiting her expectations of students but rather giving them an opportunity to demonstrate learning at a level appropriate to their needs.

Retention of learning if often an issue for students and teachers. The teacher in this example has decided that she will teach two focused lessons on flowering plants and the conditions required for growth. She will conduct an initial assessment of the student's learning outcomes at the end of these two lessons. In order to ensure that learning has been retained she will repeat the assessment exercises after a six week period has elapsed. This will enable her to decide whether the teaching has been effective and may also indicate if there is a need to revisit the teaching objectives from

these science lessons. These assessments will be conducted entirely by the teacher in order that she can satisfy herself of the efficacy of teaching and the retention of learning.

An examination of the teacher's lesson plan indicates how she has attempted to provide for the differing learning needs within her class.

FIGURE 4: Assessment priorities in a science lesson

SCIENCE: Understanding the life of a flowering plant

Activity: Students will examine three different flowering plants – geranium, oxeye daisy and buttercup. They will identify flower, petal, stem, leaf and roots and will note similarities and differences. They will be given and asked to compare three different soils (quality loam, stony soil, clay heavy soil) and asked to predict which will be best for growth of a tomato plant. They will then plant the tomato plants in three containers containing the different kinds of soil.

All students: Name the parts of the plant. Plant the tomato plants.

Some students: Write about their predictions for growth in the different soils, and provide reasons for their predictions.

Other students: Draw pictures of two of the flowering plants and label the leaf, stem, flower, petal and roots.

ASSESSMENT

All students: label the parts of a flowering plant on a providde sheet

Some students: Answer written questions about soil conditions and their impact upon plant growth

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In this lesson plan you will see that the teacher uses the expressions all students, some students and other students to anticipate what they will do and the learning outcomes that will be assessed. This form of differentiated teaching ensures that all students can be fully involved in the lesson. Had the teacher chosen to plan at only one level this would not have been achieved.

In many classrooms this pattern of assessment would be seen as adequate. In classrooms where teachers wish to promote a more inclusive approach to teaching and learning the other parts of the model presented in figure 3 above are important. They are necessary for teachers who wish not only to know about the learning outcomes of their students but also to improve their own teaching practices and to develop a classroom environment that is conducive to learning for all.

ELEMENT 2 – TEACHING

The effective teacher in an inclusive classroom asks questions about the effectiveness of the teaching process. By assessing teaching the teacher is able to maintain those teaching strategies and approaches that work well whilst making necessary modifications to ensure that the needs of all learners are addressed. Once again a series of questions focused upon the delivery of lessons can be helpful.
- What do I do that promotes learning?
- Do I do anything that inhibits learning?
- How does the pace of my teaching suit the learners in my class?
- How effectively are my lessons differentiated?
- Do my students enjoy learning?

The questions presented here are focused upon the professional skills of the teacher and demonstrate a commitment to maintain high teaching standards as well as promoting the inclusion of all students in learning. Returning again to the science lesson used as an example above, we can see how the teacher has converted these questions to develop a form of self-assessment in relation to her teaching. The figure 5 below provides an example of how the teacher assesses the teaching component of this lesson.

FIGURE 5: Assessing teaching in an inclusive classroom

HOW EFFECTIVELY ARE MY LESSONS DIFFERENTIATED?
Work planned at several levels
Students consulted about how they are able to access tasks

HOW DOES THE PACE OF MY TEACHING SUIT THE LEARNERS IN MY CLASSROOM?
Vary the activities throughout the lesson
Seek student input throughout the lesson

TEACHING

DO MY STUDENTS ENJOY LEARNING?
Lessons made interactive
Student assessments of lessons considered

WHAT DO I DO THAT PROMOTES LEARNING?
Differentiate according to student needs and abilities

SCIENCE
Flowering plants – the conditions for growth

The teacher uses this part of the model to ask critical questions about her teaching. This begins by asking herself "what do I do that promotes learning?" This may seem like an obvious question and one that teachers hardly need to ask. But this teacher is eager to know that her teaching is having a positive impact upon every student in the class. Her initial answer to this question is that she differentiates according to student needs and abilities. She pursues this issue further by asking about the effectiveness of her differentiated lesson. Here one of her indicators is the fact that she has consulted individual students about their ability to be able to access the tasks that she has set. She believes that an effective means of understanding the effectiveness of her own teaching is to go directly to her students to seek their appraisal of her lesson.

An important aspect of any lesson is the pace at which it is conducted. With students who demonstrate a range of abilities there is always a danger that either the least able are left behind or the most able do not feel sufficiently challenged. She assesses her teaching an decides that by varying the activities conducted during the lesson she has maintained the interest of her students. She has also used questioning and has engaged the students in discussion of the lesson in order to keep them interested and instil a feeling that their ideas and input to the lesson are valued. Finally she asks an important question about the lesson – "do my students enjoy learning?" It is a well-known fact that students who enjoy their lessons are more likely to retain knowledge and understanding. This teacher indicates that the interactive nature of the lessons was favoured by the students and that she has also sought their opinion about the enjoyment they gained from the lesson.

This particular teacher uses a form of self-assessment that enables her to make an appraisal of the quality of her teaching.

KEY QUESTIONS	OBSERVATIONS
What did I do that promoted learning?	Use of a good range of real materials (plants, seeds etc) throughout the science lessons made the lesson relevant to students. The lessons were very interactive and enabled all students to engage.
Did anything inhibit learning?	I could have organised the space better for the planting activity which became a little messy.
How was the pace of the lesson?	Most of the time this was good, though more time should have been given to writing activity when students were working on prediction activities.
How effective was my differentiation?	All students seemed to be able to access activities suited to their needs.
Did the students enjoy learning?	Their evaluations indicate that they enjoyed the practical activities and liked this approach to learning.

In this self-evaluation we can see that the teacher has used the questions from above to make a critical judgement of the lesson. The appraisal contains a number of positive observations such as the use of real materials that made the lesson more relevant to the students. This is tempered by observations that may provide an indication of how in the future the teacher may make modifications for improvements of her teaching. An example of this would be the necessity to provide students with more time to complete the writing activity.

This form of self-assessment cannot be managed for every lesson. This teacher aims to conduct such an assessment of a lesson twice a week in order to assess how effective she is in her commitment to inclusive teaching. Inevitably this approach only has value if the teacher demonstrates a commitment to change her teaching on the basis of the assessment she has conducted. Such a commitment may be seen as an important aspect of professionalism for teachers who wish to develop inclusive classrooms.
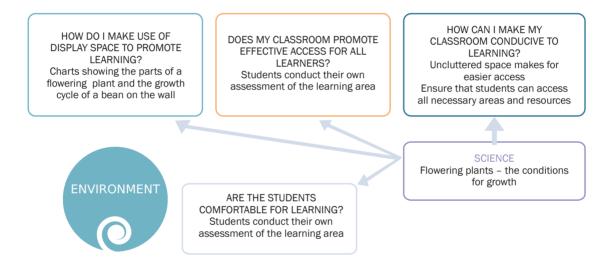
ELEMENT 3 – ENVIRONMENT

The influence of the learning environment upon academic and social outcomes in learning has been well documented (Pickett, and Fraser, 2010; Milkie and Warner, 2011). It is also evident that for some students the organisation of the classroom can prove to be a barrier to learning (Bishop, 2001). Teachers who wish to develop inclusive classrooms are well advised to consider the impact that classroom structures have upon the learning of their students, yet a focus upon assessment of environmental influences is rare. Once again the use of some basic questions can assist the teacher who wants to ensure that all students are engaged effectively in learning.

- How can I make my classroom most conducive to learning?
- Does my classroom promote effective access for all learners?
- How do I make use of display space to promote learning?
- Are the students comfortable for learning?

The teacher assesses the impact of the environment upon the learning of her students in the science lesson using the questions above (see figure 7 below). She has considered the classroom environment at the planning stage of the lesson and is aware of the need to ensure that her students have good access and are able to work effectively during the lesson. She has attempted to make a classroom that is conducive to good learning by creating sufficient space for all the students to move around. Whilst this can often be challenging it is an issue which is worthy of consideration in respect of students who may have difficulties with mobility or sensory impairments. For example, a student with a visual difficulty will be more confident in a room with a familiar lay out through which routes can be learned and in which he can move without apprehensions about bumping into furniture or being unable to find necessary equipment. The teacher in this lesson has also ensured that all the resources required for the lesson are accessible which will minimise disruption through students having to move around the classroom.

FIGURE: 7 Assessing the environment of an inclusive classroom

HOW DO I MAKE USE OF DISPLAY SPACE TO PROMOTE LEARNING?
Charts showing the parts of a flowering plant and the growth cycle of a bean on the wall

DOES MY CLASSROOM PROMOTE EFFECTIVE ACCESS FOR ALL LEARNERS?
Students conduct their own assessment of the learning area

HOW CAN I MAKE MY CLASSROOM CONDUCIVE TO LEARNING?
Uncluttered space makes for easier access
Ensure that students can access all necessary areas and resources

ENVIRONMENT

ARE THE STUDENTS COMFORTABLE FOR LEARNING?
Students conduct their own assessment of the learning area

SCIENCE
Flowering plants – the conditions for growth

Often the best way of understanding the efficiency of a learning environment is to ask the students who are required to make use of it. She is also aware that students work more efficiently if they feel comfortable and find the environment to be one in which it is pleasant to work. The teacher of the science lesson has identified these issues as a feature of her overall assessment focus. She will engage the students in an assessment of the environment and the resources provided for the lesson in order to gauge student perceptions of their own learning conditions (see figure 8 below).

The use of display space to provide stimulating materials related to the subject of the lesson is also seen as critical to providing an efficient classroom environment. For many students who have difficulties with learning the provision of visual materials that assist them in remembering details such as the parts of a flowering plant or the stages of growth can be of considerable benefit.

ELEMENT 4 – RESOURCES

The resources used for teaching a lesson are closely allied to the creation of an effective learning environment. The science teacher recognises that by assessing the resources used for this lesson may be an effective means of identifying how these support or inhibit learning. Critical questioning of the effectiveness of the resources can again be directed at the students but will only be of value if the teacher is prepared
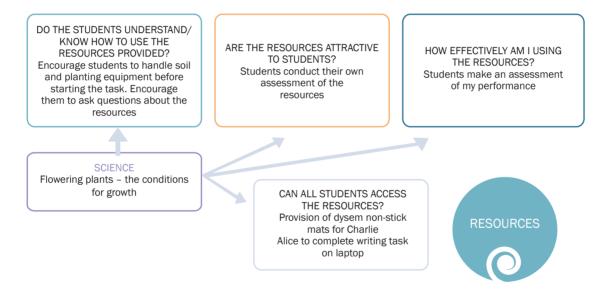
to make changes in order to improve learning opportunities.

- Do the students understand/know how to use the resources provided?
- Are the resources attractive to students?
- How effectively am I at using the resources?
- Can all students access the resources?

This fourth element of assessment for inclusive classrooms is again one that is often overlooked. Yet we know that for some students adaptation of learning materials or equipment can make the difference between being able to access a lesson or being denied the opportunity to learn (Mesibov and Howley, 2002; Abbott, Detheridge and Detheridge, 2006). Simple adaptations such as the provision of enlarged text or additional visual materials, or providing symbolic representation of events to take place during a lesson can make the difference between a student being involved in the lesson of becoming frustrated and excluded from learning.

In figure 8 we can see how the teacher of the science lesson is using questions to make assessments of the resources used with the students.

FIGURE 8: Assessing resource use in an inclusive classroom

DO THE STUDENTS UNDERSTAND/
KNOW HOW TO USE THE
RESOURCES PROVIDED?
Encourage students to handle soil
and planting equipment before
starting the task. Encourage
them to ask questions about the
resources

ARE THE RESOURCES ATTRACTIVE
TO STUDENTS?
Students conduct their own
assessment of the
resources

HOW EFFECTIVELY AM I USING
THE RESOURCES?
Students make an assessment
of my performance

SCIENCE
Flowering plants – the conditions
for growth

CAN ALL STUDENTS ACCESS
THE RESOURCES?
Provision of dysem non-stick
mats for Charlie
Alice to complete writing task
on laptop

RESOURCES

In the plan the teacher has made here there are two particular points of note. The teacher is keen to ensure that the students are confident in their use of resources. She achieves this by encouraging them to handle and experiences materials prior to beginning the formal part of the lesson. The students handle the soil and the tools they are going to use and are encouraged to ask questions about these. By adopting this approach she can observe the levels of confidence that each student has with these resources. She also identifies specific resource issues related to two individual students. For Charlie she has identified the need to provide him with a non-slip mat on which to complete the physical tasks required during the lesson. For a student with a physical disability this can make the difference between being included or merely being a by-stander in the lesson. Similarly she has allocated a laptop computer to Alice who may have difficulties with the written parts of the lesson but who can be included by the provision of a specialist resource.

The teacher knows that the only way to effectively assess the impact of the environment and the lesson resources is by directly involving the students. She devises a student assessment of the lesson and records their responses on a simple chart.

QUESTIONS	RESPONSES
Did you enjoy the lessons about plants?	Most students (29/31) said they enjoyed the lessons. One student thought there was too much writing and that he didn't always have time to finish his work.
Did the way I taught help you to learn?	Students liked having real materials to use. They liked working in groups for the practical activities. They would have liked to have more time to talk about why some of the plants grew better than others.
How did the way I organised the classroom help you or make things difficult?	Students liked working in teams to do the practical activities. They didn't like having to do some writing on "messy tables". (Next year make sure that tables are fully cleaned after practical activities before doing the written activities)

The comments recorded here provide insights into the effectiveness of the lesson as a whole. Most importantly the teacher is demonstrating her respect for her students by seeking their views and by considering how she can improve her own teaching and their learning experiences.

The four elements of assessment for an inclusive classroom presented in this chapter are intended to demonstrate how the relationship between lesson planning and assessment is a critical factor in shaping learning. The model presented has both summative and formative elements. It pays attention to the traditional consideration of learning outcomes but also recognises that the organisation of teaching, the presentation of resources and the arrangement of the learning environment have a significant impact upon the inclusion of students. The model is in many respects self reflective. It encourages teachers to interrogate their own practice and also enables students to consider those factors that enable them to learn more effectively. The relationship between assessment and action to shape learning is emphasised throughout the model. By adopting this approach the teacher makes a commitment to include her students in all aspects of planning and assessing that which is to be taught. She is also providing herself with an important opportunity to learn more about how her students learn and how she might become increas-ingly effective in addressing their needs.

It is not suggested that this level of assessment is possible for everything that the teacher does. Planning and assessment at this intensity is demanding of teacher time and requires opportunities for reflection and planning the actions to take on the basis of assessment data obtained. However, the teacher who can follow this process for one or two lessons during a week should be able to learn more about her students whilst also gaining greater insights into her own teaching to encourage the inclusion of all learners in her classroom.

CHAPTER SUMMARY

An inclusive classroom comprises a number of important components. These include:-
• A commitment to address the needs of all students
• A recognition of those components that impact upon learning including the assessment of teaching, learning outcomes, the environment and resources
• The involvement of students in decision making and assessment
• Self-reflection and assessment by the teacher
• A commitment to use assessment information to implement changes in teaching, classroom structures and management and assessment procedures

CHAPTER 7

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THE POLITICAL AND POLICY AGENDA FOR PROMOTING INCLUSION AND ASSESSMENT FOR LEARNING

INTRODUCTION

In recent years the international educational and economic landscapes have experienced rapid transformation. The transformation has been incited by the development of an economy based on industrial production to an international knowledge economy. It has created powerful incentives for a new generation to build their skills and competences through education – and for politicians in well developed countries to help them do so. A consequence as well as a premise for a knowledge based economy is the growth of higher education, which has increased opportunities for millions of young adults and added substantially to the number of talented and highly-educated individuals in a global pool of mobile workers. Countries need an increasingly educated workforce to succeed in today's and tomorrow's knowledge economy.

At the same time as this period of transformation from an industrial to a knowledge economy, demands to provide a more equitable education system have grown. International agreements such as the Salamanca Statement (UNESCO, 1994) and the Millennium Development Goals (United nations, 2000) have recognised that traditionally many young people have been marginalised within their education systems resulting in lower life opportunities in the post-school years. Governments internationally have made a commitment to address this issue and this has often placed demands upon teachers and school policy makers to make significant changes to the ways in which they structure provision in schools. Kaikkonen (2010) has emphasised that changes towards the promotion of an education system able to address these many changing demands requires that attention is given to the professional development of teachers in order to provide

them with the confidence to interrogate their own practices and align these to new demands. Kaikkonen uses the research of Strenström and Laine (2006) to demonstrate how changes in assessment procedures are critical to ensuring an equitable approach to learning. She advocates a move away from a largely quantitative approach to assessment and the collation of more qualitative data. This she suggests means that teachers become more critical of test based regimes and see assessment as essential an embedded process within the teaching armoury of all teachers. These changes she sees as essential factors in providing teachers with the flexibility needed to address both the changing educational landscape and the needs of an increasingly diverse school population.

All European countries – and many countries outside Europe – have been affected by the European financial crisis. This unwanted development shows how important it is for the economy, the labour market and for the society as a whole to strive for a high level of education. The importance of having completed higher education is shown in the unemployment rates. Education helped the Europeans to keep their jobs or to change them during the economic downturn. While the overall unemployment rate within the OECD countries between 2008 and 2010 increased from 8.8 % to 12.5 % for people without an upper secondary school education, for people with an upper secondary education, the unemployment rate only increased from 4.9 % to 7.6 %. For people with higher education it remained even lower, it rose from 3.3% to 4.7% during the same period http://www.oecd.org/edu/English%20Editorial.pdf).

People with higher education make more money than those without, generally as much as 50 % to 75 % more than those with upper secondary education only. Thus they contribute more to the national economy in their countries. Their value increases as the mobility of skilled labour between countries becomes the norm and impacts upon the Western

economy. There is an obvious drawback to this development, as the income gap between people with higher education and the less educated continue to rise during the economic decline. The only solution to this challenge however is to ease the access to upper secondary and higher education.

The OECD report Education at a Glance (2012) reveals notable differences between countries with regards to the possibilities young people are offered to enter higher education, especially so for students of poor families or students whose parents have had a limited education. In light of the considerable role education plays in promoting economic growth, countries' success in assuring younger people gain access to a higher level of education than their parents is especially important. Investing in children in the early stages of education is crucial for later success. In order to avoid the growth of inequity and socio-economic differences and maintain the stability and growth within a nations' economy, it is necessary for Governments to prioritize investment in primary and secondary education and aim for more competence in a larger proportion of their countries' populations. This means broadening opportunities for education for all learners, including those who have not previously had such access.

Admission to early childhood education has risen substantially in most developed countries. The PISA-tests show that it brings benefits to admit young children to school and pre-schools. Pupils who attended school and preschools at an early age perform better on average at 15 years of age than those who did not. Education pays, not only for the students themselves, but also for the countries that invest in them. The more years young people go to school, and the greater the governments' expenditure in education per child, the better will the effect for the national economy be.

The nations' economy then rests on the level of education their populations hold. Admission to higher education depends on completion of secondary education. Maintaining an increased number of higher education students is dependent on ensuring reasonable costs for higher education. This expansion of opportunity will also contribute to a reduction of inequality, it will increase social mobility, improve people's employment prospects and the nations' prosperity (OECD, 2012). Hence high quality education has to be a number one priority

for all modern governments, for national economies and for successful growth of societies. In recent research Myklebust (2013) has reported high levels of dependency upon social security amongst students with special educational needs who failed to complete secondary or vocational education in Norway. It is suggested in this research that schooling that takes inadequate note of the broad needs of individuals has a negative impact upon self esteem and is likely to influence the successful integration into post school life in a detrimental manner. The use of inappropriate methods of assessment that fail to take a holistic view of the needs of the learner will inevitably influence the outcomes of individuals regarded as being at risk by Myklebust.

In this context raising the standards of learning in schools is seen as an important priority in most countries today. In recent years governments all over the world have strongly proposed changes to their curriculum and the management of education in pursuit of this goal, often with regards to the necessity of keeping the country's relative standing in the modern or post-modern world, or even as a means to improve the country's economic standing compared to other developed countries. In many countries the results of international tests, usually PISA and TIMMS, enhance politicians' demands to improve education on all levels.

International tables of school performance therefore seem to encourage initiatives to improve school planning and management, but they do not give the kind of information that helps school authorities decide what measures should be taken. There are particular difficulties with such league tables that are not necessarily comparing like with like and in many instances fail to acknowledge the different socio-economic, cultural or political situation that pertains in a particular country. Quite a few countries have lately focused on national tests, target setting and more frequent control, removing the school's leadership or even closing down schools if targets are not attained. This has, for example, been the situation in England where a rigorous system of school inspection aimed at raising standards has resulted in the closure of a number of schools.

These are all means that are put into action with the intention to increase students' learning outcome. However, the

narrow focus upon measuring outcomes only through academic attainment is problematic and fails to take a holistic view of learning and the contribution to be made by education. The sum of all of these actions doesn't add up to an effective pedagogy because something very important is missing. Learning is spurred by what teachers and pupils do in classrooms. Here, teachers have to manage complicated and demanding situations, dealing with personal, emotional and social pressures among a group of usually 30 or so students in order to help them to learn, and to assist them in becoming better learners in the future.

Standards can only be raised if teachers can handle these challenges. It is often assumed that it is up to teachers — they have to make their classroom practice more effective. This attitude is not good enough for several reasons. First, it is at least possible that some changes in the inputs may be counter-productive—making it harder for teachers to raise standards. The teachers cannot be the only persons responsible for developing the necessary didactic competence and assessment literacy that ensures better learning. Secondly, it is both strange as well as unfair, to leave the most difficult piece of the standards-raising task entirely to teachers. If there are possible ways in which policymakers and others can give direct help and support to the everyday classroom task of achieving better learning, then these ways ought to be pursued energetically. Thirdly the central part of raising standards involves increasing the children's learning outcome. Although most teachers are skilled, experienced and competent and possess the necessary ability to create positive relations among the individuals in the classroom, it is unfair to make the teachers solely accountable for their students' motivation and learning. So much depends on their parents and the social and cultural environment in which the children acquire their attitudes towards school and the importance of learning.

None of the reform items mentioned in the paragraphs above are aimed at providing direct help and support for teachers. In many countries there are established approaches to inspections to evaluate schools' qualities. These inspections also look inside classrooms, and focus on how subjects are being taught, to see if the teaching is up to expected stan-

dards or national aims. Sometimes they draw attention to important assessment issues, and often conclude that the way assessment is carried out is the object of large variations.

In some countries inspections are not designed to give help and support, recommendations are usually stated in very general terms, and may be in written reports only. In these cases, the inspectors may not always have the necessary pedagogical competence to guide teachers to make optimal changes that will secure enhancement in their students' learning. In other countries the inspections are designed to help students manage the classroom challenges and their own learning in more competent ways. Inspectors who are especially competent in assessment for learning, like Her Majesty's Inspectors in Scotland, will focus on the students' learning and how to improve teachers' assessment practice, and will be a valuable asset to any school and any modern society.

The steps to ensure improved education vary between western countries. Substantial and sustained growth is dependent on updated research on what measures are deemed most effective. In 2004 OECD stated that "Developing a new assessment culture is probably the most important single change that must be done in order to raise the standards of teaching". OECD had reached an understanding of the necessity of improving schools and enhancing students' learning outcomes in order to keep up and develop further the nations' economies and the general welfare.

It should be the case that education is constantly improved in order to enable countries to benefit economically and socially. New jobs require integrated skills like critical thinking, analytic reasoning and problem solving that a modern society depends on. Cooperation, self-regulation and the ability to express matters clearly in writing are acknowledged as indicators of success. Modern education trains students to answer open-ended questions about hypothetical but realistic situations. It is crucial that the foundation for these acknowledged skills and competences are built in to primary and secondary education.

Vocational education and training plays an essential role in promoting and the furthering the development of productive employment for all nations. Young people who quit school

before they have acquired a certificate will contribute considerably less to the national economy than those who are well prepared for a modern society. Many countries have serious problems with unemployment for young adults. Vocational education therefore faces great challenges in reducing the number of school leavers and in qualifying a larger proportion of the younger generation to skilled work. An assessment practice that focuses on motivation and constructive guidance will be an important factor in this endeavour. Strong vocational programmes will increase competitiveness of the work force.

It is necessary for political and educational authorities to realize that good initial vocational education and training will contribute essentially to economic competitiveness. Unskilled jobs which have been in existence for years are rapidly disappearing, often due to new technology, or because European countries are not able to compete with less developed countries on labour costs. Instead, European countries will need to compete on quality of industrial production and services. It is obvious that this requires a well-skilled labour force, with a range of technical skills and professional competences to work alongside academically educated workers.

Technical, digital and economic development results in fast-changing employer needs and therefore creates new challenges for vocational programmes. It is necessary to build a foundation of basic and transferable skills into vocational qualifications, something which can be stimulated by a didactic practice that promotes self-efficacy and eagerness to learn. Many teachers will have to be updated in educational theory and learn new practices in order to accomplish these goals. It is no longer sufficient to learn a handicraft or a trade as a profession for life, but rather to ensure the acquisition of skills that reflect a world of career flux and change. It is an important aim of formative assessment to promote active and independent learners, qualities that are necessary in any modern country's work force.

While we so far have stated the economic and social benefits of nations prioritizing education on all levels, education is also parts of the human rights for children as stated in the legally binding instrument "The Convention on the Rights of the Child ". Article 28 in the convention spells out the Right to education:

All children have the right to a primary education, which should be free. Wealthy countries should help poorer countries achieve this right. Discipline in schools should respect children's dignity. For children to benefit from education, schools must be run in an orderly way – without the use of violence. Any form of school discipline should take into account the child's human dignity. Therefore, governments must ensure that school administrators review their discipline policies and eliminate any discipline practices involving physical or mental violence, abuse or neglect. The Convention places a high value on education. Young people should be encouraged to reach the highest level of education of which they are capable.

To achieve this goal one needs to take into consideration the results of research on didactics that show what to do and what not to do to increase students' learning outcome. Research shows that it is possible to enhance children's learning through developing an assessment culture based on participation, sharing learning goals and assessment criteria, providing effective feedback, cooperation and the stimulation of reflection and self-regulation Black and Wiliam, 1998; Hattie, 2009). These didactic factors will stimulate the skills and competences needed in modern societies as specified above. The traditional didactic approach has to be transformed from a summative to a formative assessment culture. Unfortunately this cannot be achieved solely by telling the teachers that their practice has to be changed. The teachers must be convinced through their teacher education and by post service training that formative approaches will pay off, they must be shown formative methods and be taught how to develop a formative assessment culture.

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