

## Research Space

Book chapter

**Assessment: policies and practice**

**Van Vuuren-Cassar, G. and Carpenter, C.**

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# Assessment

## *Policies and practice*

*Gemma van Vuuren-Cassar and Chris Carpenter*

### Chapter overview

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The purpose of this chapter is to provide the reader with an overview of the aims and purposes of educational assessment. In order to do this the principles behind educational assessment will be considered, their relationship with educational policy is examined and then the implications for early years and primary practice will be outlined.

### Introduction

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There is general consensus that school assessments impact upon the educational achievement and future success of many people across the world and are a significant feature of most modern educational settings. In this chapter we will introduce the reader to issues regarding assessment in Early Years and Primary School settings. Educational assessment can be hard to understand and in part this may be because it serves a number of different purposes. For example, assessment information may be used to give feedback on learning to enable students to get the support they need to improve. It may also be seen to provide evidence about the effectiveness of different educational methods and can act as an indicator of the accomplishments of individual learners. In modern times the assessment of attainment is used as a means to hold teachers to account so as to try to ensure that public money is being spent wisely (Mansell *et al.*, 2009; Black and Wiliam, 2007).

Assessment has been widely acknowledged to be a key element of the learning and teaching cycle (Clarke, 2001; Black *et al.*, 2003). The intention is that the Early Years and school curriculum provide a common core of knowledge and experiences for young learners across all the settings where they are being educated. An effective curriculum is delivered in an open and transparent manner where students and teachers work together to facilitate learning. Inevitably, assessment risks labelling teachers, learners and institutions as successes or failures especially as in current

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times, the high levels of political intervention in education means that education policy on assessment is consistently newsworthy. Governments regularly voice their concerns emphasising the need for measurements of progress in schools; 'robust assessments' and controversial online headlines such as 'Tougher primary tests and top teachers in weak schools' (Coughlan, 2015), where an education correspondent for a newspaper went on to report that:

As well as the 'baseline tests' when pupils start in Reception and national curriculum tests, often known as SATs (Standard Assessment Tests), taken at the age of 11, the government is looking at a tougher approach to tests at the age of seven.

Teachers and early childhood professionals need to be knowledgeable about assessment (Athanasou and Lamprianou, 2002) because they spend a considerable amount of their time each day employing a range of assessment strategies such as observations, asking questions and then using the information to inform the feedback that they give children and to inform their next steps. The fact that children in different situations are so diverse makes assessment such a fascinating topic to study.

As we will see in the third section of this chapter, the policy-making arena is a volatile one and at the time of writing this chapter, teachers are being required to adopt a process of assessment without levels (DfE, 2013). The case for assessment without levels in the UK was prompted by political debate and consultations which revealed that in 2012, fewer than half the pupils who reached the expected standard at the end of primary school in English and mathematics achieved five A\*–C GCSEs at age 16, while seven in ten of those with a level 4 at the end of primary school in these subjects achieved this GCSE standard. The Department for Education thus proposed that:

Teachers will continue to track pupils' progress and provide regular information to parents. How they do so will be for schools to decide, suited to the curriculum they teach. We will not prescribe a single system for ongoing assessment and reporting.

(DfE, 2013, p. 6)

This chapter takes into account the ongoing changes and challenges that the assessment landscape poses for teachers in Primary Schools and Early Years settings as they develop assessments and track progress of learning. With changing National Curriculum expectations in the United Kingdom (UK), teachers need to re-establish confidence in the accuracy of their daily assessment judgements in a context where levels no longer apply.

## Assessment

In this section we will offer the reader an overview of the aims and purposes of educational assessment and also present a definition of some key concepts. The terms *assessment*, *test*, *measurement* and *evaluation* are often used interchangeably

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in the field of education; however, it is important to distinguish between them. Assessment is a generic term defined as a course of action for generating information that is used for making decisions about what learners understand and can do. The Standards for Educational and Psychological Testing<sup>1</sup> define assessment in education as a 'process that integrates test information with information from other sources' (p. 3). Delandshere (2001) defined assessment as a process of forming 'value judgments and interpretations that determine the significance, the importance, and the value of learning and knowing' (p. 132). A test is normally a formal process involving a task, instrument or systematic procedure for generating, observing, describing, computing and recording one or more characteristics, abilities, knowledge or other attributes of a learner. On the other hand, a test has been defined as an 'evaluative device or procedure in which a sample of an examinee's behaviours in a specified domain is obtained and subsequently evaluated and scored using a standardized process' (The Standards for Educational and Psychological Testing, p. 3). Measurement is defined as a procedure for awarding numbers (scores or levels) to a specified quality (e.g. knowledge, skill, competence) in a manner that the numbers/grades describe the degree to which the individual possesses the quality. A numeric measurement is usually linked to a descriptive criterion or set of criteria expanding what that number stands for. A distinction can be made between measurement and testing, in that tests are the instruments by which measurements are made (Hargreaves, 2005).

Normally, a mixture of assessment techniques or modes (Rowntree, 1977) is used in educational settings. Such modes may include, but are not exclusive to, informal, formal, process, product, continuous, terminal, convergent, divergent, coursework, examinations, internal, external, formative and summative assessments. Satterly (1989) points out that these dimensions deal with different aspects of assessments and answer the basic 'what', 'when', 'who', 'why' and 'how' questions of assessment.

Test scores can be pooled together to generate a measurement and information about how a school, region or nation is performing with reference to national and international goals, learning outcomes, standards or benchmarks of such testing procedures. For example, test scores of year groups of pupils are published by the Department for Education<sup>2</sup> online on an official web page entitled 'School and College Performance tables' while newspapers<sup>3</sup> and broadcasters<sup>4</sup> also publish these national scores. The government in the UK claims that information is in the interest of the general public, and acts to hold educational sites to account as it means that parents and other stakeholders have some knowledge about how schools and regions are doing. Many national, regional and local education authorities use benchmarks for testing the success of individual schools at the various stages of schooling from entry to leaving. Other examples of large-scale assessment systems where worldwide test scores for students of the same age are computed and published online include the Progress in International Reading Literacy Study (PIRLS<sup>5</sup>), the Trends in International Mathematics and Science Study (TIMSS<sup>6</sup>) and the Programme for International Student Assessment (PISA<sup>7</sup>) (Black and Wiliam,

2007; Stobart and Eggen, 2012). These worldwide tests result in world rankings of performance of nations, and the results often serve the purpose of improving national education policies and outcomes.

Assessment is a broader term since the scope of a test or measurement is narrower; not all assessments yield measurements. Evaluation is defined as the course of action following the process of assessment. Evaluation of individuals can take place while they are still in the learning process, often referred to as formative or coursework assessment, whereas when evaluation occurs after the educational process has been completed it is often called summative or terminal assessment (Rowntree, 1977; Nitko and Brookhart, 2011). Evaluation is a term which is typically used for schools, programmes and educational material. Formative evaluation is ongoing and occurs after every session in a programme where amendments are often made to session notes. Summative evaluation of schools' programmes and educational materials tend to summarise the strengths and weaknesses, and describe whether the school-implemented programme or educational materials have attained the stated goals. Summative evaluations are usually not intended to provide suggestions for improvements, while formative evaluations are.

There is a consensus that the main purposes of assessment in education are for learning, accountability and certification, while other appropriate purposes include feedback, motivation, diagnosis, goal setting, selecting and screening (Black *et al.*, 2003; Broadfoot, 1979; Gipps, 1990; Satterly, 1989; Wragg, 2001). A significant aspect of assessment in practice that emerged from the literature includes two key concepts: Assessment *for* Learning and Assessment *of* Learning (Black and Wiliam, 1998, 2005, 2009). Assessment *for* Learning, also referred to as 'formative' or 'informal' ongoing assessment, usually takes place in classrooms and involves the class teachers and professionals who work with the class teacher. It usually refers to assessment procedures involving feedback that improve learning by providing information for teachers and pupils about learning and guides them in planning the next steps in their teaching and learning respectively. What does it look like in the Early Years and primary school settings? Day-to-day school activities that are not graded, such as dialogue, questions and answers among teachers and pupils; sharing of learning outcomes; observing; discussing; comparing; analysing; verbal and written comments; nonverbal gestures; portfolio, and individual education plans become formative assessment when the evidence is actually used to adapt the teaching to meet learning needs (Black *et al.*, 2003). Meanwhile, Assessment *of* Learning, also called 'summative' or 'formal' assessment, takes place at a fixed predetermined time, and involves marking, grading or recording of a value judgement. Tools that are used for summative assessments include specific tasks of an oral, written and/or practical nature, questions, observations and tests. The focus is on what one has learned and achieved (Wragg, 2001). Furthermore, the links between assessments and inclusion that have arisen from research into effectiveness for all learners (EADSNE, 2009; Bennett, 2011) emphasise that inclusive schools support learners with diverse, linguistic, cultural, educational and cognitive needs.



Nevertheless, assessment is often described as a double-edged sword. On the one hand, the learner is evaluated about the progress of learning or some other criteria, while some teachers might fear testing and assessments since they will be judged about their potential lack of ability to ensure that all learners are successful in achieving their targets. While schools should be held accountable for learning, using assessment findings as a factor of determining whether one teacher is teaching better than another is not appropriate (Gullo, 2005). One may argue that assessment and learning need to be a process integrated with the curriculum in the early years and the primary schooling setting. The purpose of assessment in education is about ongoing learning progress in curricular domains for all learners in a diverse learning setting. Assessment then should be about assessing that which is supposed to be measured, rather than that which is most easily assessable.

The body of literature on the principles of assessments in education such as validity and reliability (Popham, 2011; Osterlind, 2010; Reynolds *et al.*, 2010; Wragg, 2001) provides useful guidelines for those involved in assessments. Validity questions whether an assessment measures what it is supposed to assess and is fit for purpose. Validity is the evaluation of the adequacy and appropriateness of the interpretations and uses of assessment results for a given group of individuals (Miller *et al.*, 2013) and is measured in levels such as high, moderate or low. Content-related validity or face validity refers to the extent to which the programme/learning objectives and the content and methods of teaching and learning are represented in the assessment. This determines how well the sample of assessment tasks represents the domain of tasks. Content validity typically comprises knowledge, skills, competencies, attitudes, behaviours and other relevant components. Meanwhile, construct-related validity evidence is judged by determining how well an assessment can be interpreted as a meaningful measure of some quality or ability. An example would be a written test in maths or science to young learners who are not yet proficient in reading and writing. In this case one will be measuring their achievement in language rather than maths or science. Reliability refers to the consistency of a measurement (Miller *et al.*, 2013) and looks at the similarity of results if different test items are used, if the test was repeated on another occasion, or if a different teacher had graded the test. Unless the results from the assessment are reasonably consistent over different occasions, different markers or different tasks (in the same content domain), confidence in the results will be low and so cannot be useful in improving student learning. Reliability is measured statistically (Popham, 2011; Osterlind, 2010). Assessments with more tasks usually result in higher reliability. Other factors that contribute to higher reliability include clarity of instructions and language in assessment tasks, clear marking criteria, and a common understanding and application of the marking criteria.

A fair assessment provides all learners with an equal opportunity to learn, and to demonstrate what they have learned, without any bias or discrimination related to factors other than what was taught. Therefore, the learning tasks, assessment activities and feedback/marking of performance-based and non-cognitive assessment should

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be free from bias and disadvantages related to race, religion, gender, ethnic background and special needs (Bradbury, 2013; McMillian, 2013). Fairness is consolidated when learners are knowledgeable about what they are expected to learn and how they will be evaluated. Good teachers assess children regularly to inform teaching, provide feedback to pupils and communicate children's progress to parents.

### Assessment: a pause for reflection

- How do you understand the terms assessment, test, measurement and evaluation?
- What do you see as the main purposes of educational assessment? How do they match with your experience as a student?
- What is 'reliability' in assessment? How important do you feel this is?
- What is validity in assessment? How important do you feel this is?

## Educational policy and assessment

### Introduction

Many of the defining features of the education system we see today can be traced back to the Education Reform Act 1988 (ERA, 1988). This has been widely acknowledged as the most significant single piece of educational legislation in England, Wales and Northern Ireland since the 'Butler' Education Act (1944) (Ball, 2008; Ward and Eden, 2009; Garratt and Forrester, 2012). The changes in state education brought about by the ERA (1988) were part of a wider range of public sector reforms brought in by the Conservative government at the time. These reforms were intended to modernise public services by placing the providers of those services in a free market with the idea that as those providers would have to compete to deliver the services, this would improve efficiency, and drive standards up and prices down.

In this section we will consider the implications for educational assessment when education is placed in a free market. In particular we will look in detail at the implications for teacher assessment and the consequences of the 'high stakes' assessment that the adoption of free-market principles heralded. Finally, we will look at the current recommendations for assessment in the latest policy for the 3–11 stage and draw out the implications for schools.

### Education since the Educational Reform Act (1988)

Before the ERA (1988), education had operated very much outside the direct control of central government. Funding for schools had been devolved to local education authorities who then administered schools in their area. Local education authorities

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(LEAs) are the local councils that are responsible for education within their jurisdiction. The ERA (1988) gave over 250 new powers to the Secretary of State for Education (Chitty, 2009; Brighouse, 2011) and effectively began a process of dismantling the previous delicate balance of powers that had existed between central government, local authorities, the schools themselves, teachers and, in some instances, the Church. In effect it marked a move towards a process of centralisation and political intervention in all aspects of education that has gathered pace since 1988. The increasing pace of change means that we exist in something of a 'policy frenzy' (Stronach and MacLure, 1997), with new policy initiatives like fireworks bursting into life and then dying away to be quickly replaced by a new one.

Three of the defining features of the ERA (1988) were a National Curriculum, national tests at age 7, 11 and 14, and a new inspection regime for schools. At the heart of this legislation was the need to make education more accountable to its 'users' and central to this was the idea that there had to be an element of choice whereby parents and carers could specify which school was the preferred option for their children's education. This led to education being positioned as a private good rather than as a public responsibility (Whitty, 2002) and marked a shift to neoliberal, free market principles increasingly underpinning educational policy (Ward and Eden, 2009). Of course it may be argued that by treating parents and carers as 'consumers', the state had, to some extent, reneged on its responsibility as a site for education, and children's futures were left to be decided by the market.

Neoliberalism is primarily a theory of political economic practices that is based on the proposition that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills. This can best occur within an institutional framework characterised by strong private property rights, free markets and free trade. In such an ideology the role of the state is to create and preserve an institutional framework appropriate to such practices (Heywood, 1998; Harvey, 2005).

With parents being constructed as consumers, it followed that they needed to be empowered to make choices, and so visible measures of accountability were required. Two of the solutions to this were found in the development of the Office for Standards in Education (OFSTED) which published their reports in the public domain, and the publication of examination/test results being another. The latter was to have profound implications for assessment which apply to this day, and will be considered in more detail here.

## Education in the marketplace: implications for assessment

With education in a marketplace, assessment information became a means by which schools could demonstrate their accountability to the public and enable parents and carers to make decisions about which school to send their children to. Tests and examinations were presented as tangible and quantitative measures which could be used to 'judge' schools. In fact it has been argued that the term 'assessment' was reduced to being synonymous with objective and mechanical processes

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involving checklists, precision, explicit criteria and incontrovertible facts and figures (Drummond, 2000).

It should be noted at this point that examination and test scores, while often presented as 'true' and 'objective', have limitations. First, at the point of 'allocating' the number to the student's work the teacher is making an interpretation of some kind and this may be seen as a 'construct'. Therefore it may be argued that to some extent what the assessor sees is a 'fabrication in the mind of the beholder' (Rowntree, 1987, p. 84). This is especially true when allocating numbers to more open-ended and subjective 'products' of education such as art and poetry. Second, and related to the first point, is that the process of allocating numbers often erects a pseudo-objective façade on what was a deeply subjective process of interpretation on the part of the assessor (Rowntree, 1987). Third, educational achievements as assessed by grades often serve to *measure* and do little if anything to *create* talent (Dore, 1997). The test is principally a measure of how good the student is at taking the test and this may not necessarily be highly congruent with other aspects of what might be deemed to be worth learning in that subject. Finally, given the unreliability of test scores, it may be seen that if school effectiveness is based on grades then if no attempt is made to obviate them these inaccuracies are actually built upon (Harris and Bennett, 2005).

It should also be remembered that it has been shown that the giving of 'grades', 'marks' or any kind of number can have a negative effect on students' achievement (Black and Wiliam, 2012), the idea being that students will often focus only on the grade and ignore the comments. What seems to make a difference is if the students are given formative comments and, most crucially, are expected to respond to the comments in some way.

The final point to be made here is that when school effectiveness relies on assessment grades this can have a restricting effect on the curriculum. If teachers are accountable for the test scores rather than effective learning (Pollard *et. al.*, 2000), this can mean that the range and depth of learning is compromised. This is because there is a temptation for teachers to 'teach to the test' as doing well in the test becomes the point of education rather than developing a love of the specific content under consideration (Torrance, 1997). Of course in this it should not be assumed that 'teaching to the test' is an unequivocally bad thing but that it can mean that rich learning which might have been possible can be lost to the demands of performing well at the test.

## Implications of assessment policy for practice in current times

Earlier in this chapter it was argued that a characteristic of educational policy since the ERA (1988) has been that it tends to be subject to change at a fast pace. This is especially true at the moment where it may be argued that we are in a time of some considerable policy ambiguity as regards assessment. One of the major features of the latest round of reform is that assessment levels have largely been removed from policy directives. Not only that, but the role of assessment appears to have been reconceptualised.

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In the United Kingdom the Early Years Foundation Stage (EYFS) is defined as a framework for children up to the age of 5 which sets out six areas for learning. These areas are personal, social and emotional development; communication, language and literacy; problem-solving, reasoning and literacy; knowledge and understanding of the world; physical development and creative development. The recommendation for assessment is summarised below.

Accurate assessment will depend on contributions from a range of perspectives including the child's. Practitioners should involve children fully in their own assessment by encouraging them to communicate, and review, their own learning. The assessment should build on the insights of all adults who have significant interactions with the child.

Accurate assessment requires a two-way flow of information between setting(s) and home. Reviews of the child's achievements should include those demonstrated at home as assessment without the parents' contribution provides an incomplete picture of a child's learning and development.

(Standards and Testing Agency, 2013, p. 11)

The key points to note here are that it is advised that assessment should come from a range of perspectives while in school and also that there should be knowledge of the children's home setting. This may be seen as having advantages and disadvantages. The advantage is that the staff at school may well have a better appreciation of the child's background and this can be helpful in informing their interactions with the child in school. The disadvantage is that this may be seen as being intrusive.

At the present time primary schools in England are working to the latest version of the National Curriculum which was published in September 2013. In this version the word 'assessment' appears only once on page 8 where in a section on 'Setting suitable challenges' the advice is that 'Teachers should use appropriate assessment to set targets which are deliberately ambitious' (DfE, 2013, p. 8). This marks a departure from the higher levels of prescription that had been a feature of earlier versions of the National Curriculum. In the meantime there had been a widespread consultation carried out in the sector that drew upon responses from 1,187 individuals and organisations, of which 27 per cent were from primary school head teachers and a further 27 per cent from primary teachers, which was published in March 2014. In this it was reported that:

Good teachers assess children regularly to inform teaching, provide feedback to pupils and to communicate children's progress to parents. This assessment does not need government to prescribe how it should be done.

(DfE, March 2014)



The report also outlined a number of recommendations:

There will be different approaches to assessment through a child's education and development, using the most appropriate approach for capturing children's learning at each stage and to complement ongoing teacher assessment:

- The existing statutory 2-year-old progress check undertaken in Early Years settings.
- A short reception baseline that will sit within the assessments teachers make of children during reception.
- A phonics check near the end of Year 1.
- A teacher assessment at the end of Key Stage 1 in mathematics, reading and writing, informed by pupils' scores in externally set but internally marked tests (writing will be partly informed by the grammar, punctuation and spelling test); and teacher assessment of speaking and listening and science.
- National tests at the end of Key Stage 2 in mathematics, reading, grammar, punctuation and spelling; and a teacher assessment of mathematics, reading, writing and science.

(DfE, 2014)

Thus we can see that the role of assessment is being reformed and that there is a very clear privileging of some areas of the curriculum such as literacy and numeracy. At the same time the government announced the 'Assessment Innovation Fund' which it was said would enable assessment methods developed by schools and expert organisations to be scaled up into 'easy-to-use' packages for other schools to use.

Then, in November 2015, Nicky Morgan, the Secretary of State for Education, announced that there would be a reintroduction of the national tests for 7-year-olds in England, saying that 'robust' assessment was needed to measure progress in schools.

## Summary

Thus it may be concluded that we are living in a time of some considerable uncertainty as regards the policy recommendations for educational assessment. The removal of levels may be seen as an opportunity for teachers to move to a more 'comment-only' approach but at the same time it is clear that in some respects there will continue to be 'high stakes' testing.

### Policy and assessment: a pause for reflection

- How do you see the role of government in educational policy in modern times?
- What do you feel are the possibilities and limitations of using assessment data as a means to judge school effectiveness?
- What do you feel might be some 'side effects' of educational assessment?
- What do you feel about assessment without levels? What are the implications for practice?

## Assessment in practice

This section attempts to outline briefly what assessment can look like in practice in the Early Years and Primary School settings and classrooms. The discussion will extend to some of the thorny issues of the birthdate effect on assessments and inclusive assessments.

### Early Years

In the case of Early Years, the education of and care for young children aged 3 to 5 is often referred to as child care, day care, nursery school, preschool, pre-kindergarten and early education. It can be delivered in a variety of settings: centre based, home based or at local state schools in the community. The learning and assessment activities are often recorded in profiles (STA, 2015a) and activities may also be embodied in a particular philosophy or approach to early childhood education such as Montessori, Reggio Emilia or Waldorf Schools (Edwards, 2002). In the latter settings, parents receive voluminous descriptive and illustrative information about their children's daily life and progress, and share in culminating authentic productions or performances. Meanwhile, in the Early Years settings portfolios and other artefacts of children's individual and group work may be exhibited and sent home at regular intervals and transitions. The most common elements of early childhood education support three key developmental domains: cognitive (language development and problem-solving skills), physical (gross/fine motor development) and social-emotional (interactions with others in a group) to children's overall development (Gordon and Williams Browne, 2016) and academic elements such as numeracy and literacy (Bradbury, 2013). Nevertheless, the Early Years setting promotes a high degree of challenge and enjoyment and personalisation and choice through planned opportunities to explore different activities, materials and contexts. Learners engage with imaginative and creative use of both indoor and outdoor learning tasks and environments (Canning, 2010), while staff in these

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settings are encouraged to experiment with innovative approaches. Learning tends to occur through a wide range of well-designed activities that are of relevance (relationships with past experience and culture of learners), coherence (connections within and among subject areas) and breadth (a comprehensive range of experiences across a subject area) (Clark, 2015). Assessment is ongoing (continuous) and provides constant feedback (formative), and both experiences (process) and end results (product) are rich sources of evidence of progress of learning. Assessments typically involved teachers and learners building up evidence of learning from a wide range of sources (e.g. observations, records, digital captures of activities, conversations, discussions, models of different textures, self-assessments, rating scales) that ensure monitoring of the progress of learning for each individual, and afford the planning of the next steps in learning. Assessment information is shared and discussed with learners, parents and other stakeholders as appropriate, which then makes learning and assessment objectives transparent. Therefore, the authentic experiences that children engage with in the Early Years settings are captured, recorded digitally, annotated and added to individual hard copies and digital portfolios.

In the United Kingdom, the Early Years Foundation Stage (EYFS) framework sets standards for the learning, development and care of children from birth to 5 years old (Department for Education, 2014). All schools and OFSTED-registered Early Years providers must follow the EYFS, including child minders, preschools, nurseries and school reception classes. This framework supports an integrated approach to early learning and care. It gives all professionals a set of common principles and commitments to deliver quality early education and child care experiences to all children. As well as being the core document for all professionals working in the foundation years, the EYFS framework gives confidence to parents that regardless of where they choose for their child's early education, they can be assured that the same statutory commitments and principles will underpin their child's learning and development experience. A series of downloadable resources are available to support teaching, learning and assessment in the EYFS, including an assessment handbook and a profile template from the gov.uk web page. The areas of learning of the EYFS include communication and language; physical development; personal, social and emotional development; literacy; mathematics; understanding the world; and expressive arts and design (Department for Education, 2014). The introduction to the EYFS Statutory Framework (SF) affirms that the EYFS seeks to provide partnership working between practitioners and with parents and/or carers. Although the EYFS statutory profile assessments data are no longer compulsory as from September 2016, the EYFS itself will continue to be statutory. Nevertheless, learners will benefit if the providers of the Early Years settings send information about the levels of learning and development in each of the areas of learning for individual children, classes and year groups; and the attainment of children born in different months of the year.



## Primary schooling setting

In the United Kingdom, the National Curriculum levels for children aged 5 to 16, namely levels 1 to 8, have been removed as from the academic year 2014/15. Schools are therefore empowered with deciding how best to assess, record and communicate the progress of their pupils, and at the time of writing are at very different stages with developing these new systems without levels. It seems likely that issues around consistency, transferability, quality, reporting, accuracy, moderation and inspection will continue to dominate the ongoing development of assessments without levels in schools. The Department for Education in England published the document *Reforming Assessment and Accountability for Primary Schools* where it is stated that the new assessment and accountability system for primary schooling will set a 'higher bar' (DfE, 2014, p. 4), and will reflect the more challenging National Curriculum. Henceforth, it was argued, the more challenging tests will report precise scaled scores (a score where 100 will represent the new expected standard at a stage) at the end of the key stages, rather than a level, to raise expectations. Meanwhile, some of the accountability measures introduced include the introduction of a 'reception baseline' (DfE, 2014, P. 7) as the starting point from which to measure a school's progress. In addition, a new minimum requirement, known as floor standards, will be communicating and reporting the progress made by pupils from reception to the end of primary school. Furthermore, schools will be required to publish information on their websites so that parents can see the progress pupils make and the standards achieved. The new floor standards hold 'schools to account both on the *progress* they make and on how well their pupils *achieve*' (DfE, 2014, p. 10). Meanwhile, in the case of a small minority of low-attaining learners for whom assessments under the new National Curriculum are not deemed appropriate, Performance Scale indicators (P scales),<sup>8</sup> may be used.

The use of educational technology in assessments (e-assessment) brings about new practices such as peer- and self-assessment in the early years and primary school settings; nevertheless, most studies in e-assessment are related to higher and further education. Virtual learning environments (VLEs), including a number of technologies such as Blackboard and Moodle, have emerged as a technology for teaching and learning (Becta ICT Research, 2004; Lazakidou and Retalis, 2010) and may become important tools for e-assessment. Teaching practices with VLE tools facilitate the use of quizzes, multiple-choice activities, portfolios and collaborative writing tools. Meanwhile, there is a growing interest in how e-assessment can foster new educational goals, such as creativity, project work and communication skills. A study conducted by Johannesen (2013) found that tools, like wikis, may be more conducive to processes of collaboration and may be more successfully employed in primary school. The use of a virtual learning environment can promote certain assessment practices, and has the capacity to influence assessment policies at primary and other levels of the educational setting. Meanwhile, in an effort to demonstrate progress of learning, schools are engaging with developing software

applications for tracking progress or working with commercial software companies that offer e-profiling and communication platforms (Lilly *et al.*, 2014), often as a management information dashboard and removed from the VLE that supports learning and teaching within the same educational setting.

Informal formative assessment in the primary setting, also known as assessment for learning, is characterised by a strong emphasis on students' active involvement in assessment, especially through processes like peer- and self-assessment (PASA) (Black *et al.*, 2003). PASA can lead to increased student self-regulation and achievement in the primary setting. Nicolaidou (2013) found that fourth-grade students were able to create more complex corrective peer comments on writing tasks with continued practice through an e-portfolio system. Meanwhile the capability of students to offer sophisticated feedback on tasks depended largely on student expertise and ability in the domain. Therefore engaging students in peer- and self-assessment will benefit from training and practice that can potentially help improve the value of their comments. Other typical assessment activities that facilitate learning through teacher–pupil(s) and pupil(s)–pupil(s) interactions during the day-to-day activities in the school setting may include: sharing the learning and assessment objectives; questioning; observing; discussing; analysing; checking children's understanding; engaging children in reviewing progress; teacher- and pupil-generated feedback that helps the learner understand what they have learned and achieved, and what they need to do next to progress their learning and content knowledge.

Some of the most common educational objectives that support learning in the schooling setting have been conceptualised into the holistic nature of transformative learning experience. Transformative learning requires independent, active learners regardless of age (Bracey, 2007). The model for transformative learning emphasised the cognitive domain (head) to critical reflection, the affective domain (emotions) to relational knowing and the psychomotor domain (physical movement) to engagement (Sipos *et al.*, 2008). More detailed information about the definitions of each of these domains has been developed elsewhere (Miller *et al.*, 2013; Krathwohl, 2002) and will not be discussed here. Similarly, information about how these domains can be embedded into the day-to-day and end-of-unit activities and assessments may be found in various sources (Lilly *et al.*, 2014). Thus, Table 5.1 attempts to exemplify the key educational objectives of these domains that inform continuous and terminal; process and product; formal and informal; and formative and summative assessments.

The revised Bloom's Taxonomy developed by Krathwohl (2002) comprised a two-dimensional framework: knowledge and cognitive processes. Table 5.2 provides a clear overview of the classification of learning and assessment objectives. This table is an enhanced 'Table of Specifications' (Ebel and Frisbie, 1991; Miller *et al.*, 2013) whereby a course or curriculum is defined broadly to include both the subject matter and the learning and assessment objectives. The former is concerned with the topics to be learned and the latter with the types of performances students



**Table 5.1** The key educational objectives of domains of learning

Learning objectives	Domains of learning objectives to engage the learners		
<b>Cognitive</b> (head – thinking skills)	Knowledge /(remembering)		
	Comprehension		
	Application		
	Analysis		
(Bloom et al., 1956)	Synthesis/(evaluation)		
(Krathwohl, 2002)	Evaluation (creating)		
<b>Affective</b>	Receiving		
(heart – social and emotional skills)	Responding		
	Valuing		
	Organisation		
(Krathwohl et al., 1964)	Characterisation by a value or a value complex		
<b>Psycho motor</b>	1. Reflex movement	1. Perception	1. Imitate
(hands – physical/	2. Basic fundamental	2. Set	2. Manipulate
kinaesthetic skills)	movements	3. Guided response	3. Precision
	3. Perceptual abilities	4. Mechanism	4. Articulation
	4. Physical abilities	5. Complex overt response	5. Naturalisation
	5. Skilled movements	6. Adaptation	(Dave, 1970)
	6. Non-discursive communication	7. Origination	
	(Harrow, 1972)	(Simpson, 1972)	

**Table 5.2** The knowledge dimension

The knowledge dimension	1 Remember	2 Understand	3 Apply	4 Analyse	5 Evaluate	6 Create
A Factual knowledge	List	Summarise	Classify	Order	Rank	Combine
B Conceptual knowledge	Describe	Interpret	Experiment	Explain	Access	Plan
C Procedural knowledge	Tabulate	Predict	Calculate	Differentiate	Conclude	Compose
D Metacognitive knowledge	Appropriate use	Execute	Construct	Achieve	Action	Actualise

Adapted from Krathwohl (2002).

are expected to demonstrate potentially linked to cognitive, psychomotor and affective learning objectives. Both of these aspects are important and provide a framework for a holistic process for the learning, teaching and assessment continuum.

The function of summative assessments or a terminal assessment at the end of a unit of work, a year or a key stage in the primary school setting is to measure



achievement and the progress of learning over a period of time. These assessments are then communicated to pupils and parents. In England, these results are published on school web pages on an annual basis, the idea being that these performance tables enable schools to be judged and held to account in matters of student progress. The publication of these performance tables is controversial because there can be a risk that the low-achieving schools and regions are stigmatised as well as labelling the teachers and pupils in those schools. However, to withhold this data would reduce the access to information which it is argued is of interest to parents, politicians and the general public. Those who argue for the publication of such results believe that this leads to healthy competition that can motivate low-achieving schools to work harder.

One of the reasons why the publication of student and school results is a contentious issue is due to the birthdate effect. There is robust evidence from around the world that, on average, the youngest children in their year group at school perform at a lower level than their older classmates (Daniels *et al.*, 2000). This is a general effect found across large groups of pupils, in particular summer-born pupils. Although they may be progressing well, the strength of the effect for the group as a whole is an issue of very significant concern (Sykes *et al.*, 2009). In the UK, where the school year starts on 1 September, the disadvantage is greatest for children born during the summer months (June, July and August). The effect of being the youngest in the year group prevails in other countries where the school year begins at other times in the calendar year. The birthdate effect is most pronounced during infant and primary school but the magnitude of the effect decreases gradually and continually through secondary school (age 14 to 16) and high school (age 16 to 18). Research by the Institute of Fiscal Studies (Crawford *et al.*, 2013) showed evidence of the disadvantage for August-born children over September-born children in that the expected attainment dropped from an average of 25 per cent at KS 1 (age 7) to 12 per cent at KS 2 (age 11), to 9 per cent at KS 3 (age 14), to 6 per cent at KS 4 (age 16) and to 1 per cent at A level (age 18). Although Sykes and colleagues (2009) believe that the existing research is illuminating in respect of the extent of the birthdate effect and of its causes, work on remedies to alleviate the issues related to birth effect is not sufficiently adequate and robust to formulate a solution. They conclude that, from the work of comprehensive reviews of the quality of primary and Early Years education, it is likely that an acceptable solution will lie in not only development of a strategy regarding when formal schooling should start, but also – at least – in respect of:

specific balance in respect of curriculum elements devoted to cognitive, emotional and social development; the training requirements of teaching and support staff; curriculum frameworks; inspection foci; pupil grouping strategy; management of differentiation; and the articulation between early years units and compulsory schooling.

Meanwhile, Crawford and colleagues (2013) proposed that assessment feedback be adjusted so as to provide information on attainment at a specific age (rather than at a certain point in time) in one of two ways: first, by adjusting test scores for children born in different months while keeping the same absolute cut-off for levels, including the expected level; second, by adjusting the cut-off at which children born in different months would be deemed to have met each level, including the expected level. The latter approach is favoured because it retains the advantage of preserving an absolute measure of the performance of learners based on test scores, which could be given to teachers and parents if required, while providing an age-appropriate assessment of whether a child is at, above or below the expected level of attainment.

### Pause for reflection

- If the main elements of early childhood education are a concern with cognitive, social and emotional dimensions, how do you feel each one might best be assessed?
- What do you think about the 'birthdate effect'?
- What do you feel about the use of assessment data to promote competition between schools? What might the side effects be?
- What do you feel are the educational possibilities of peer assessment?

## Conclusions

### Recap of main points

What we have argued in this chapter is that educational assessment is a fundamental means by which educational messages are transmitted to children. We have suggested that since 1988 education in the UK has been subjected to high levels of political intervention, and that has served to shape the ways in which assessment is conceptualised and enacted in all settings.

Educational assessment, like any other aspect of education, has developed its own set of conceptual language and what we have tried to do here is to demystify this for the reader. We have also posited the idea that in essence educational assessment serves to act as a means of feedback on learning; as certification and particularly since the Educational Reform Act (1988) it has also been used as a means to make judgements about teacher accountability. These three aims, while being logical in their own right, may actually be in conflict and we hope that knowing the three purposes will help you make sense of both the theory and practices of educational assessment.

Finally, we have also given the reader an overview of how educational assessment activities are employed in Early Years and primary settings, in particular the idea

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of assessment that serves summative and/or formative purposes. We have also considered the latest government initiative of 'assessment without levels' which at the time of writing is in place in state-maintained schools, the argument being that levels became viewed as 'thresholds' or 'markers' and that quite naturally much teaching became focused on getting pupils to 'pass' the next threshold rather than ensuring deeper knowledge and understanding in the programmes of study.

## Points for further reflection

In order to help you take your thinking forward, we have identified some questions for you to reflect on:

- What is your understanding of the terms *assessment*, *test*, *measurement* and *evaluation*?
- How do you see the relationship between teaching and assessment?
- At this point, how do you understand the 'what', 'when', 'who', 'why' and 'how' of assessment?
- What are the differences between *formative* and *summative* assessment?
- What are the challenges and possibilities of assessment without levels?
- To what extent is educational assessment based on theories of learning? Should this be the case?
- Is there a danger that we can end up privileging that which can most easily be assessed? Does that matter?
- To what extent do you feel that children end up being defined by educational assessments?
- How has educational policy shaped educational assessment since 1988?
- In any setting where you are working or placed, what assessment practices have you seen?
- What do you feel technology can offer educational assessment processes?

## Notes

- 1 The Testing Standards are a product of the American Educational Research Association, the American Psychological Association (APA), and the National Council on Measurement in Education (NCME). Published collaboratively by the three organisations since 1966, it represents the gold standard in guidance on testing in the United States and in many other countries. Available at [www.aera.net/Publications/Books/StandardsforEducationalPsychologicalTesting\(2014Edition\)/tabid/15578/Default.aspx](http://www.aera.net/Publications/Books/StandardsforEducationalPsychologicalTesting(2014Edition)/tabid/15578/Default.aspx) (accessed 28 January 2016).



- 2 Available at [www.education.gov.uk/schools/performance/](http://www.education.gov.uk/schools/performance/) (accessed 5 January 2016).
- 3 Available at [www.telegraph.co.uk/education/primaryeducation/](http://www.telegraph.co.uk/education/primaryeducation/) (accessed 5 January 2016).
- 4 Available at [www.bbc.co.uk/news/education-30422468](http://www.bbc.co.uk/news/education-30422468) (accessed 5 January 2016).
- 5 The Progress in International Reading Literacy Study (PIRLS) is an international assessment administered every five years that measures trends in students' reading-literacy achievement and in policy and practices related to literacy. Available at <http://timssandpirls.bc.edu/> (accessed 5 January 2016).
- 6 The Trends in International Mathematics and Science Study (TIMSS) is a series of international assessments of the mathematics and science knowledge of students around the world. Available at <http://timssandpirls.bc.edu/> (accessed 5 January 2016).
- 7 The Programme for International Student Assessment (PISA) is a triennial international survey which aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students in reading, mathematics and science. Available at [www.oecd.org/pisa/](http://www.oecd.org/pisa/) (accessed 5 January 2016).
- 8 P scales: attainment targets for pupils with SEN. Available at [www.gov.uk/government/publications/p-scales-attainment-targets-for-pupils-with-sen](http://www.gov.uk/government/publications/p-scales-attainment-targets-for-pupils-with-sen) (accessed 28 January 2016).

## Recommended reading

In this section we have chosen books on assessment that we feel are worth your consideration for various reasons.

Rowntree, D. (1987) *Assessing Students: How Shall We Know Them?* London: Kogan Page.

In our view this is one of the timeless classics in the field of assessment. While educational policy sets the backdrop and tends to be ever changing, many of the issues at the heart of educational assessment remain the same. In this book Rowntree takes the reader through both the philosophical underpinnings of assessment and also highlights the implications for practice in a way that makes difficult issues easy to appreciate.

Assessment Reform Group (1999) *Assessment for Learning: Beyond the Black Box*. Cambridge: School of Education.

This has come to be seen as a landmark publication. It may be seen as one of the few instances of research informing educational policy. The work is a concise synthesis of research undertaken over a ten-year period by some of the leading thinkers in the field such as Patricia Broadfoot, John Gardner, Caroline Gipps, Wynne Harlen, Mary James and Gordon Stobart.

Black, P., Harrison, C., Lee, C., Marshall, B. and Wiliam, D. (2003) *Assessment for Learning: Putting it into Practice*. Maidenhead: Open University Press.

This is an ideal companion to 'Inside the black Box' as the authors have taken the key ideas and considered how they have played out in practice. To do this they have drawn upon case studies and foregrounded teachers' voices.

*Question:* When is a comment not worth the paper it's written on? *Answer:* When it's accompanied by a level, grade or mark! Author(s): Simon Butler. Source: Teaching History, No. 115, ASSESSMENT WITHOUT LEVELS? (June 2004), pp. 37–41.

This is a very accessible paper about using assessment without levels. The author develops a rationale and then gives examples of how he has used the principles in a secondary history context.

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Harlen, W. (2007) *Assessment of Learning*. London: Sage.

This is a very helpful book written by one of the leading academics in the field and a core member of the assessment reform group. Harlen looks at the philosophical basis for educational assessment and takes the reader through many of the implications. He locates many of the issues in the educational policy landscape and highlights tensions that are not readily visible to the reader such as the 'uses' and 'abuses' of assessment information.

Gardner, J. (2012) *Assessment and Learning*. London: Sage.

This book consists of chapters written by eminent academics in the field of educational assessment. It is both an ideal first stop for newcomers to the field and also offers the more experienced valuable insights into many aspects of assessment. The chapters are organised into themes of purpose and practice of assessment; impact; theory of assessment; and validity and reliability.

Miller, D., Linn, R. and Gronlund, N. (2013) *Measurement and Assessment in Teaching* (11th edn). Boston, MA: Pearson Education.

This is a book written by North American academics and this is reflected in the tone of the chapters which tend to focus on the practical issues related to implementing assessment and do not really address the philosophical considerations. The authors tend to approach this with the assumption that assessment is principally a matter of 'measurement' rather than 'interpretation'. However, the reader is taken through the processes of assessment methods in great detail and, especially for newcomers to the field or for teachers who are charged with implementing assessment processes, this book has much to offer.

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