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A glossary of terms relating to assessment for learning

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Assessment

There are many terms in the English language related to assessment including the activities of evaluating, reviewing, auditing, appraising, checking, controlling, inquiring, investigating, inspecting, managing performance and so on. What they all have in common is the notion of noticing, perceiving, observing, interpreting, generating knowledge, understanding and judging people, organizations, objects and processes. The general aim is to maintain standards and improve quality. Assessment refers to all forms of accompanying and supporting individual learners by generating knowledge of them and the ongoing development of educational quality based on reflection, review and research.

Cronbach (1971) has suggested that any assessment is in essence a procedure that involves validating an interpretation of data on the basis of which, teachers make inferences about student's learning. As Black and Wiliam (2018) point, out from this perspective,

the distinction between formative and summative becomes a distinction in the kinds of inferences being drawn from assessment outcomes. Where the inferences relate to the status of the student, or their future potential, then the assessment is functioning summatively. Where inferences relate to the kinds of actions that would best help the student learn, then the assessment is functioning formatively (553).

Drummond describes effective assessment as “ a process in which our understanding of children's learning, acquired through observation and reflection, can be used to evaluate and enrich the curriculum we offer”(1993, 13). Assessment means accompanying the learner and offering helpful advice based on what we judge to be of value. Assessment should enhance the learner's sense of themselves as capable people and competent learners.

Assessment involves a complex set of skills that are referred to as *assessment literacy*, which means the ability to practice assessment, the ability to critically understand the issues related to assessment (e.g. the nature of performance, the validity of assessment data such as grades etc.) and the ability to communicate about assessment.

Assessment reflects the values held by teachers, schools and expressed by education policies. These values determine what is deemed important and this in turn reflects the overall educational philosophy. These values are expressed in terms of criteria and specified outcomes that have indicators and various methods are used to gather information about performance (including the ability to reproduce knowledge) and interpret these. Assessment generally focusses on prescribed knowledge, skills and general dispositions such as well-being or resilience.

The criteria used to assess usually reflect the educational philosophy as expressed in aims and intentions of a particular approach or statutory requirements. Most countries have national expectations or standards which schools have to meet, though individual schools may also have their own aims as well. These aims can range from very general to detailed and specific year by year, subject by subject attainment targets.

As Black and Wiliam (2018) point out, assessment is always embedded in the wider context of pedagogy, in that assessment and particularly formative should ideally be part of a continuum of teaching and learning. If we understand pedagogy as the understandings informing the relationships between teaching and learning, then these understandings reflect assumed theories of learning and these in turn are based on assumptions about the nature of the human being (ontology) and the nature of knowledge (epistemology).

Effective classroom relates to the overall aims of the education and the specific aims of a given programme of study or curriculum. Assessment is done before, during and after lessons. It enables teachers to understand the learning process better and give helpful feedback to the pupils.

Assessment also reflects the theory of learning that informs the educational practice, for example;

- behaviourist views of learning require behaviourist modes of assessment (e.g. performance depends on reproducing memorized facts and demonstrating skills under test conditions by individuals irrespective of context and are usually norm-referenced and or criterion-referenced);
- positivist views of knowledge assume that knowledge exists objectively and once assimilated, can be demonstrated and tested;
- cognitivist-constructivist approaches focus on problem-solving using conceptual models, often applied to material such as data, graphs, texts, images to judge understanding and often uses a framework of scaled stages (e.g. PISA tests, SAT tests, multiple choice tests),
- socio-cultural views of learning see learning and thus knowledge and skills as situated in authentic settings, often involves self-and peer-assessment, uses portfolio and situated assessment (e.g. authentic assessment, naturally occurring evidence).

Therefore methods of assessment should align with the theory of learning underpinning a given educational practice.

Anecdotal assessment

Teachers make notes of observations they make during lessons and whilst reading through students' work. These may refer to student behaviour, attitudes, participation (e.g. in group work), individual learning needs, in relation to expectations the teacher has. The closer in time the notes are written to the observation the more objective they are likely to be. The

notes can be referred to in development conversations with students, in case studies, meetings with parents. The notes are usually brief but comprehensible and can be added to following period read-throughs and reflections. A folder containing anecdotal notes should be kept and accurately dated

Holistic and complementary assessment

There is a categorical difference between the activities of a learner and her experience of these both during the activity and afterwards, and the assessment of that action by another person such as a teacher based on some technique or instrument of assessment or measurement. In fact these two positions are fundamentally different, incompatible and incommensurate. Furthermore, since assessment in institutions has consequences that are often asymmetrical, that is, the assessment usually carries more weight institutionally than the experience of the learner, or the institution is dependent on the successful outcomes of assessments (i.e. in terms of the school's reputation or in ranking procedures), it is important to find appropriate epistemologies and ontologies for this activity.

As Julia Buchheit (2009) has shown in her study on measuring experience in educational settings, one way to over-coming this problem is through complementarity theory. This basically goes back to the work of the physicist-philosopher Niels Bohr. Following Bohr's quantum mechanics, the theoretical concepts of position and momentum are relative and relational depending on how each is measured; light can simultaneously have the properties of a wave in motion or a particle. Bohr was convinced that this theory of complementarity had explanatory power beyond the field of physics, and could, for example, help analytically frame the relationship between psychological and physiological phenomena. The complementarity principle says that two contradictory and incommensurable elements alongside each other, horizontally, as it were, can both be seen as starting points of a movement towards a higher, vertical principle that unites both aspects in a third element.

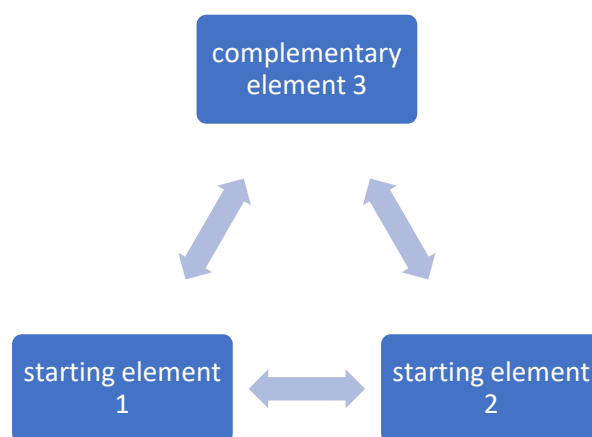


Figure 1 Elements 1 & 2 are contradictory, but both are complementary to the transcendent element 3

Buchheit (2009) has applied this conceptual model to the challenge of measuring experience in pedagogical contexts, though the idea can be extended to any form of assessment or evaluation in which a judgement about a learner's actions is made and reported

or documented. It may seem obvious but it is worth emphasizing that the report of what a learner has done is categorically different to the original action and the learner's experiences of this. The experience the assessor has of the learner's action based on knowledge derived from observations, or judgements based on applying criteria or some instrument of testing and represented in some form of report or grade, is fundamentally different to the learner's experience. The outcome of a learning process is partly represented by the assessment, whether this is a grade or a report and the risk is, of course, that the assessment and report comes to be seen as *the outcome* of the learning and thus, as ultimately more important. People confuse the assessment with the actual achievement. In the end it is often the assessment that has the more impact on a learner's future and is what is remembered, rather than the act of learning itself. Much depends on assessments in education today, so finding ways to retain something of the 'value' of the achievement, of the actions as performed in the assessment is an important challenge.

Both perspectives, that of the learner and that of the assessor, are valid but they are not compatible or commensurate. However looked at from a social perspective using complementarity theory, the phenomenon being studied or assessed contains both aspects within it, the learner's perspective and that of the assessor. Thus a pedagogical action can and should be understood as incorporating both perspectives as inseparable. The pedagogical task is therefore to find the appropriate balance between the learner's actions and experiences and the assessing and reporting actions. The researcher/assessor is not in a neutral position, simply 'reporting the facts' but is part of the collective process of understanding the learning phenomenon, the person's learning and the person's experience of her learning. Assessing therefore means finding ways in which both students and assessors are united in a process of learning that is dynamic and strives to do justice to both roles and positions.

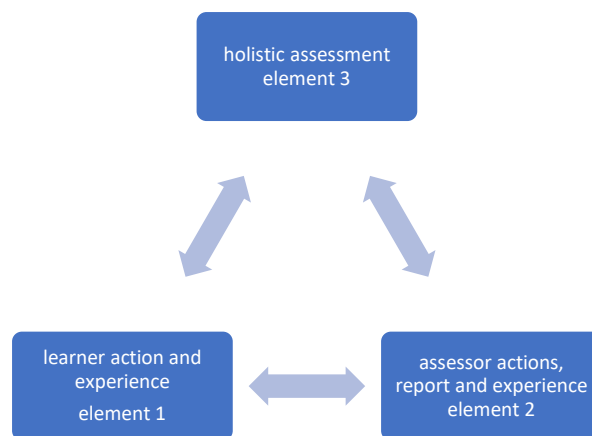


Figure 2 The incompatible elements of the learner's actions and experience and the assessor's actions, experience and report can be brought together in a holistic assessment that tries to find an appropriate balance and relationship between learner and assessor

This perspective acknowledges that learning is a social process that occurs within a communities of practice and a learning culture that involves the actions, expectations, attitudes and talk of everyone within that learning community. Learning is not only embodied by individual learners and teachers but is distributed across the practices and artefacts that

belong to it (such as testing procedures, assessment regimes, school reports etc.) and is afforded by the learning culture. In turn the learning culture is shaped and coloured by the learning experiences of all involved. This systemic or holistic view of learning is important to bear in mind. Therefore there should be an ongoing reflection on the appropriate balance within assessment processes.

As Gergen and Gill (2020, 40) point out, “while education is a social process, it should also enable the active participation in the social process. Secondly, education should sustain and enrich potentials of the social process itself”. Thus assessment should enrich social processes of learning and enhance the potential for effective cooperation. Assessment must lead to enhanced participation, cooperation and relationships.

Assessment for learning

Assessment for learning means the focus is on noticing, recognizing, responding to, recording and revisiting students’ learning. The aim is to offer the learner feedback she can use.

Assessments are recorded in the form of short narratives rather than grades. This approach seeks to interpret evidence of learning so that teachers can decide where the learners are in their learning, where they need to go and how best to get there, for the benefit of the learners. It means sharing learning goals with pupils, involving them in self-assessment and providing them with feedback, which helps them to recognize the next step. It assumes that every student can improve and often involves a holistic approach that sees learning not just as cognitive achievement but as overall development of the person.

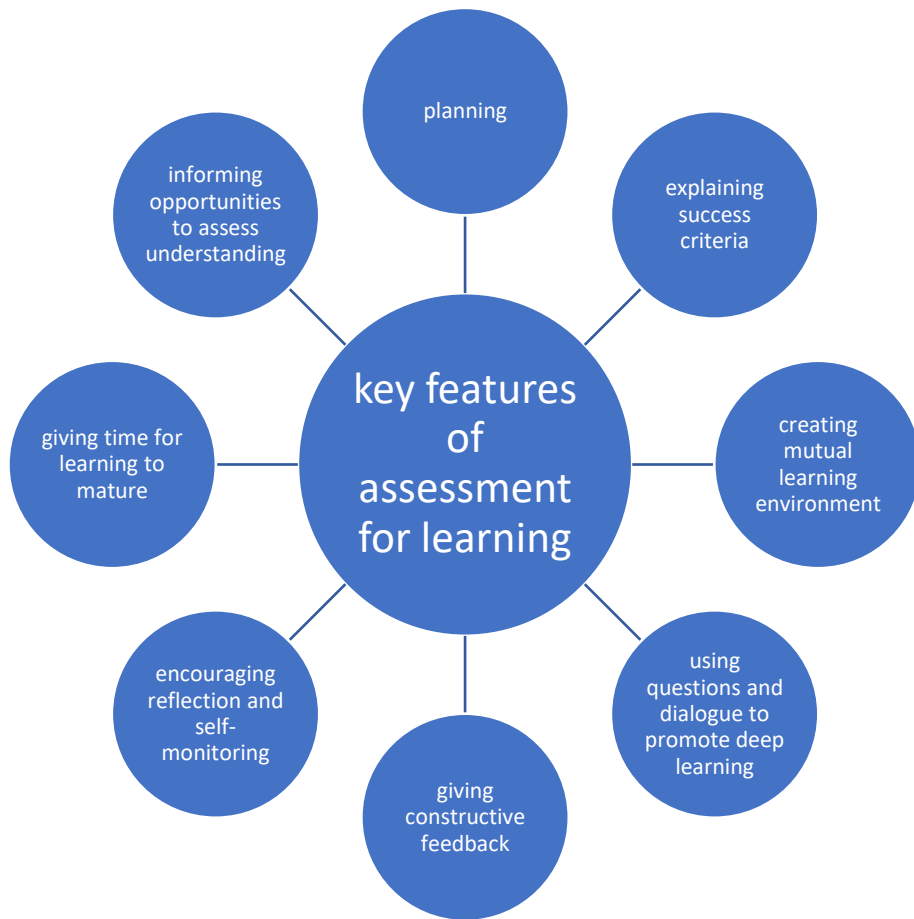


Figure 3 The key features of assessment for learning (after UK National Foundation for Educational Research brushing-up-on-assessment series)

Classroom assessment for learning is usually focused on developing skills and builds on students’ understandings of these skills, expressed as “I can...” and the process of getting to those skills in clear, reachable steps that mark progress. Thus students’ monitoring their own progress is important. One way of doing this is see learning as a continuum from not being able to do something to being able to do something autonomously.

I can do this:

only with help with a lot of help with some help without help



Or in terms of knowledge, the learner can judge whether she:

doesn’t know this...knows something of it...knows much about it...knows a lot about it

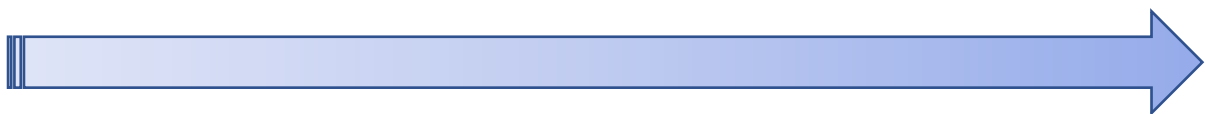


Figure 4 The learning continuum of skills and knowledge

Assessment for learning grew out of the recognition that assessment *is* learning (Black and Wiliam, 1998), or can be, and that assessment as learning can involves students monitoring their own learning (Hayward, 2015). This has led to programmes such as Assessment is for Learning in Scotland (Hayward, 2015), which try to align assessment, pedagogy and curriculum. This alignment theoretically is intrinsic to Waldorf education, though in practice assessment often tends to be informal and unconsidered.

Classroom assessment refers to assessment in which the judgements about what gets assessed and how it gets assessed and the criteria being used and what consequences the assessment may have for the students are made by those who teach the students (Black and Wiliam, 2018).

Competency-based learning (synonyms: outcome-based learning, standards-based learning, proficiency-based learning)

Learning that focuses on mastery of knowledge and skills. Competence or proficiency are usually determined by testing in which a minimum score is required to be deemed proficient. Competencies are usually defined as sets of attributes, behaviours, areas of knowledge, skills and abilities as predictors of performance. Competences are more general than learning outcomes and usually cannot be measured exactly. They often refer to different domains of learning, such as content, method, social or self-competences.

Diagnostic assessment

This can be used to identify whether individual pupils need support and as a basis for a judgement what kind of help is necessary and available. Diagnostic assessment is sometimes associated with a focus on problems and deficits.

Evaluative assessment

This usually involves the assessment of a whole school or department.

Feedback

Feedback is information about a task or ongoing process that links what is understood and can be done with what is being aimed at. It can be a powerful influence on learning behavior when it helps the learner take the next step, through motivation, showing specific aspects of the learner's work that can be improved in relation to her own performance. However, as John Hattie (2012) points out, the most powerful feedback is from the student to the teacher and the teacher can synchronize teaching and learning. Everyone has to learn how to give and receive feedback. It requires a particular school culture that encourages learning from mistakes and taking pride in improvements and works in an atmosphere of mutual trust.

Hattie and Clarke (2019) offer the following key points for optimizing feedback:

- feedback needs to relate to whether the learning is at surface, deep or transfer levels,
- feedback should focus on possible improvements,

- learner dispositions are vital for feedback to be effective because how they respond to feedback is vital, for example they need to be disposed to learning from feedback and disposed to improve their work,
- effective feedback requires a trusting relationship between teacher and student,
- feedback should avoid comparison with other students,
- praise can detract from the actual need to improve,
- prior knowledge is the starting point for feedback,
- goals should be specific, known to the students (and where possible co-constructed) and tasks easy to comprehend,
- feedback should aim to close the gap between current and intended learning,
- feedback goes in both directions; from teacher to student and student to teacher,
- the more meaningful the context, the more this strengthens learning and spaced learning including forgetting is more effective than massed learning.

Formative assessment

Formative assessment is process-orientated. It includes the monitoring of the ongoing learning process of individuals and groups and it is used to make adjustments to the learning process. It is concerned with how learning occurs and is either informally or formally noted by the teacher or is used to provide feedback to students. Knowing how pupils are learning, what difficulties they may have, what they can do well enables teachers to offer the right kind of support at the right time and provides the teacher essential information about the effects of her teaching. Therefore, formative modes of assessment are used to accompany learning processes and give individual pupils ongoing and concrete feedback. It is important that pupils understand in age-sensitive and language appropriate ways what the learning aims are and what criteria will be applied to assess a particular assignment or block (what Americans call rubrics), how to achieve them and how they are currently doing. This can be done verbally at the start of a block or for older pupils it can also be provided in writing so they can refer to it. Teachers use informal and formal formative assessment in their ongoing lesson reviewing and planning processes.

Taras (2005) argues that all forms of feedback require some kind of implicit, explicit, formal or informal judgement that is by definition summative and that therefore formative assessment is actually summative assessment plus feedback.

Ipsative-referenced assessment

Ipsa is Latin for self, therefore ipsative means self-referenced. That means a pupil's performance is assessed against her own prior performance. This means assessment is relative to the person. The same summative achievement might mean a great improvement and effort for one person or the result of little effort and no improvement for another. Ipsative assessment is a way of individualizing feedback to the person, taking that person's whole situation into account. It means the student is not competing against others but with herself. The pupil asks, "can I do better than last time? Can I improve on what I have achieved so far?" Ipsative assessment gives the individual an answer to this question.

Ipsative methods are used in one-to-one pedagogical conversations, both informal and formal, in which the learner is helped to recognize her own progress measured against her own previous achievements and levels of participation. Thus the pupil has the feeling that she is not competing with others or external standards but is trying to do better, or maintaining her own standards. Children and young people undergo all manner of developmental crises prompted from outside or through changes in themselves and this often impacts on school learning. They need to be helped to see what these causes and symptoms are, recognize the effect they are having on them, rather than having the feeling “I am too stupid” or “it’s the teacher’s fault that I don’t get it”. Then they can find ways of moving on with the help of the teachers.

Learning dispositions

These are a set of habits of mind, ways of seeing and thinking that have been embodied and shape the way people learn, such as resilience (e.g. ability to learn from mistakes), ability to ask relevant questions, collaborative learning, playfulness and resourcefulness and the ability to improvise. Learning dispositions are not only attributes of people but of learning situations that enable and call for these qualities. Assessment for learning prompts learning dispositions, particularly learning narratives.

Learning objectives (synonyms academic benchmarks, expectations, learning targets, performance indicators, rubrics)

Objectives specify what students should learn within a given timeframe (from lesson to school year).

Learning outcomes

The outcomes are what they have actually learned. A learning outcome can be precisely defined and measured. Sometimes the term learning outcomes refers to the learning objectives. It must be recognized that some aspects of learning are difficult to observe, such as changes of perspective and attitudes, the overall development of the person and her relationship to the world. Many learning outcomes are actually quite difficult to find evidence for many aspects of learning that are long-term and involve deep learning. It requires considerable pedagogical skill to devise methods of assessing long-term learning since this involves more than just testing facts. Open questions are useful but require an interpretative assessment that takes a variety of factors into account, including the relation of form and content, the examples used to illustrate understanding, awareness of methodology and limitations of knowledge, the application of understandings to unfamiliar and complex tasks, the use of sources and resources, language, logic or argumentation, judgment, independent thinking and originality and so on, depending on the field.

Learning progression

This is the notional and intended sequence of teaching and learning across subjects over time. They usually imply a growth of knowledge and complexity of knowledge and skills and they frequently map out the main steps to be taken and learning expectations. Students can

monitor their progression in that keep a record of the assignments they have written, whether have improved and corrected work that has been marked, or through self-assessments using simple checklists, such as:

I didn't do my homework because (tick the following)

- I didn't have time
- I forgot/ was busy with other things
- I didn't really understand what I had to do
- I didn't have the relevant information
- Other reasons (please describe briefly)

Teachers can monitor learning progressions when they have a fine grained framework of progressions in a given subject and evidence that the necessary skills or knowledge have been learned by individual students. This involves having checklists and regular monitoring.

Learning for Well-being

The L4WB model offers a framework of core capacities that can be practiced from four perspectives, physical, emotional, mental and spiritual. The model does not offer a specific approach to assessment but the core capacities could be used as criteria for judging the extent to which a student's experience relates to their well-being. A questionnaire has been developed to establish the well-being of schools by asking students, teachers and parents about aspects of the school that they experience.

Moderation

Moderation is a process by which teachers agree in their judgements about students' work, the tasks given, the methods of assessment, the specific criteria, marking schedules and even the content of lessons. Internal moderation is peer-assessment within a school, external moderation involves other expert teachers.

Narrative methods/learning stories

These are stories told by children about what was important for them. They provide a record of children's learning that is entirely holistic because naïve and not framed in relation to separate criteria. Over time the stories change, become longer, broader, deeper. Noting, appreciating and recording narratives is an important assessment tool.

Naturally occurring evidence

Hipkins (2012) defines naturally occurring evidence as evidence of learning derived from observing activities in natural classroom situations or in real contexts, that is when learners are doing things in the natural course of events and in typical activities. This specifically means that evidence for assessment should not be derived from "specially contrived assessment events"(98). Assessment is therefore set in a meaningful context in which a range of skills and knowledge can be used. This is particularly useful to monitor learning progressions in which competences can be performed and demonstrated and documented

using, for example, a checklist. Naturally occurring evidence is perhaps best used to judge group work and projects, conversation in L2 lessons. Where the assessments have summative intentions and are part of exams, then validation may need to be affirmed by a second teacher.

Norm-referencing

This means comparing students' achievements with other students, either in the same class or same age group.

Pedagogy

This term has many meanings often related to national educational cultures. I find it helpful to understand pedagogy as our understandings of the relationship between teaching and learning and all the factors that influence both of these processes, including the values and beliefs that inform the practice. As Nind, et al (2016) put it, pedagogy is a craft, an art and a science. As a craft it deals with the tools, techniques and materials of teaching, as an art it combines materials and processes in unique ways in specific situations to enable the learners to undergo transformations. Artistry in teaching, as Eisner (1994) put it, makes learning an emergent-generative processes. In pedagogy as science, we try to understand pedagogical experiences systematically with the help of theory. The relationship between pedagogy and assessment touches on each of these aspects. There are many craft aspects of assessment and it can be applied with artistry and is a systematic and interpretive science.

Assessment serves the aims that pedagogy sets itself and these aims relate to what is understood as the function of the education and both of these relate to the anthropology- the nature of the human being- that underpins an educational approach, which provides us with a theory of learning and the metaphors we use to refer to this (i.e. inscribing a *tabula rasa*, filling a container, kindling a fire, participating in a community of practice etc.).

Portfolio

A portfolio is a purposeful collection of sample of student work, student self-assessments and meta-level reflections. Portfolios can be used for assessment. They can contain texts (including first drafts for comparison), photographs of work, mind maps and graphic organizers, journal entries, evidence of corrections. The key principles of a portfolio are that the learner selects work she wants to be representative of her achievements and perhaps justifies her choice, and the portfolio shows process as well as final outcomes. Portfolios can be judged according to a range of criteria relating to content, form, presentation, impact and uniqueness. They help students recognize and understand their own progress and supports their self-learning, as well being a useful way to display work. Texts written about the contents tell stories about their origins and developments.

Skills

Skills are only meaningful in contexts that afford their use (i.e. one cannot play a violin if one has no instrument) and skills usually assume some knowledge (of music notation, keys and how to hold the instrument) and they are applied for a purpose. Therefore skills can be

defined as knowledgeable action with purpose. Bransby and Rawson (2020) define skills as knowledgeable action with purpose.

Standards

Standards are learning goals set by external agencies such as government education departments that apply to all students in a particular age group or subject.

Summative assessment

Summative assessment makes judgements about whether outcomes have been achieved. This kind of assessment can be used to establish if a student has completed a task successfully and has learned what was required. It usually occurs at the end of a period or block of learning before a new stage or phase starts. It is often formalized by paper and pen tests with clear criteria for achievement, though it can be verbal. It requires a judgement based on evidence as to whether a pupil has achieved what they set out to achieve. This assumes that there is baseline of criteria defining what pupils are supposed to achieve. In many schools, summative assessment is most commonly used for purposes of accountability to external bodies, e.g. by highlighting how many students pass exams at certain levels. This often affects the status of the school. Summative assessment can also be based on the outcomes of a series of episodes of learning collected in a portfolio.

Steiner/Waldorf principles of assessment

Taking a Waldorf perspective on assessment means locating the act of assessing within a frame of Waldorf educational practice and interpreting modes and methods of assessment in these terms. Very few aspects of assessment are original to Waldorf with the possible exception of textual school reports (or report cards) and specific approaches to pupil case studies (child studies), both discussed below. Essentially a Waldorf approach means trying to understand individual students, taking the whole person bodily, emotionally, socially and spiritually, and then offering them support in their learning and development. Assessment in a Waldorf context is never just focused on academic activity and is only used for primarily for purposes of accountability where this is a statutory requirement. Assessment ought to be used for curriculum development, but this is rarely observed in practice.

In keeping with its overall philosophy Steiner/Waldorf schools have a set of generative principles relating to assessment (Bransby & Rawson, 2020):

- Assessment for learning is a vital support for pupils' learning and development.
- The learning being assessed takes the whole person into account, in ways described in this book, and includes assessment of socialization, qualification and appreciation of the development of the person.
- Assessment evaluates the things that Waldorf education values and is comprehensive.
- Waldorf practice uses formative, ipsative and summative assessment for different purposes.

- Testing is not used to select children or students to enter the next level (e.g. entry to grade 1, transition to high school) and all students have the right to 12 years of education.
- Grades are not given until the high school and usually in connection with external exams. Instead, formative assessment is used, mainly through narrative texts (annual written reports that characterize the person and her achievements and written feedback on students' work) and formal and informal conversations. Students never have to repeat a year or course if their performance is not adequate.
- Since learning should be experiential and social, performance assessments are necessary (e.g. naturally occurring evidence).
- Cooperation and mutual appreciation rather than competition are encouraged and students are motivated through ipsative-referenced assessment (i.e. in relation to their own previous levels of attainment).
- Assessment gives teachers important feedback on their teaching as part of their planning reviewing process.
- Individual case studies by teachers are practiced to gain insight and understanding of the child's biographical development in order to form an open picture of what is emerging.
- Assessment should be effective, unobtrusive, embedded in classroom practice, unbureaucratic, yet also well-documented.

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