How to transform teaching through Assessment for Learning

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Summary

Assessment for Learning (AfL) is crucial to effective teaching. It is a continual learning process: in the course of teaching, assessments of student learning are made in order to inform the next step in the teaching and learning process. AfL increases student engagement and self-efficacy, improves learning outcomes, raises achievement and produces more equitable learning. However, it can be challenging to implement well. It involves a transfer of ownership of learning to students, particularly through emphasising self- and peer assessment, and requires the development of students' skills. It also calls for a supportive learning space. Here we provide useful strategies, techniques and examples to help teachers implement AfL. We encourage teachers to reflect on their practice and take steps towards transforming classroom learning by taking on these new practices and making them habitual.

What is Assessment for Learning?

Assessment for Learning (AfL) is about undertaking assessment during the flow of learning in order to impact upon that learning. It sounds appealing and simple. However, it can be surprisingly challenging to put into practice. As a result, it doesn't always have the positive impact on learning that is expected.

Assessment for Learning refers to the **formative** use of assessment information, gathered from **both formal tests** and **informal observations** of students, their work, and their responses in classroom discussion, **to gain insight into the students' learning progress**, so that teachers and students can **adapt their teaching and learning strategies** to better support that learning.

Examples of AfL include:

- Teaching all content of a unit in the first eight weeks of term, then testing students. Analysing the test scripts and using that information to plan the content for the final two weeks of term.

- Giving each student an index card at the close of a lesson and asking them to respond to a question to assess their understanding of what was covered in the lesson; e.g. "Why are historians concerned about bias in historical sources?" Collecting in the cards and using this information to plan the next lesson.

- Asking students to predict the results of an experiment by raising hands, to check their understanding of a concept. Observing which students are very confident and accurate in their predictions, and which seem confused, and then using this information to pair confident students with less confident students for the lesson's activity.

- Students using a framework to evaluate each other's work in pairs, and to suggest one way their partner can improve, before supporting each other to revise their work.

- Providing students with the terms of a concept map, and asking them to organise the terms to show their understanding of the interrelationships. Moving around the class to monitor their progress, stopping to ask students to explain their reasoning and addressing any misconceptions.

- Hot-seating the teacher: encouraging questioning of the teacher by the students, to prompt students to identify the information or knowledge they need, as well as for the teacher to learn about students' thinking from their questions.

- 'Taking an answer around the class': asking students to build on one student's initial answer, to get a selection of responses from students, as well as to enable students to learn from each other.

Why do AfL?

When done well, AfL enhances learning by indicating where learners require additional support and what is appropriate next as a learning challenge. It is a process of 'learning, for learning, in learning' — teachers and students are continually learning about what understanding the students have gained, in order to inform the next teaching and learning act.

AfL is a collaborative partnership between teachers and students in which teachers and students learn together about students' learning progress and needs. AfL supports the transfer of the ownership of learning to the students, so that students gradually come to manage their own learning.

It is based on increasing use of self- and peer assessment which, in primary and secondary education, are shown to:

- increase student engagement and enable greater autonomy from the teacher

- reduce the gap between the highest and lowest achievers, and raise achievement overall

- support more equitable outcomes for all students

- improve motivation and perseverance

- develop students' self-regulation skills and metacognition (understanding of their learning)

- give students a strong sense of self-efficacy for developing their own effective study habits

- enrich students' reasoning and improve communication skills

- create a more egalitarian and supportive classroom environment

AfL generates:

- information for teachers to use for their instructional decisions

- information for students to use for improving their performance

- information that motivates students' learning *(Brookhart, 2007)*.

The challenges of AfL

AfL is based on teachers and students making significant changes to beliefs and practices around learning. It entails a renegotiation of roles and identities. Teachers become facilitators, rather than directors, of learning, and have to share their previously exclusive role of evaluation. Students have to rethink what it means to participate in class (expressing their thinking rather than regurgitating the right answer), and are increasingly held accountable for their learning progress. Some students resist change to AfL practices because the emphasis on thinking for themselves can be very threatening.

It also takes time to develop students' awareness of their own learning processes and skills so that they can self-assess. This is done by building practices into routines and carrying them out long enough for them to be viewed as normal and natural. Students are often well socialised to school routines and teaching practices so short-term experiments with AfL make little impact. Perseverance is necessary.

Students can only appraise their own and others' work and effectively in a safe, supportive and respectful environment. Teachers need to cultivate positive relationships and a safe space so students can negotiate new learning identities.

How to introduce AfL

Take courage and start small. Reflect on what you do now, then try out some changes. Perhaps begin by using questions to encourage thinking. Or try improving your feedback. Work slowly towards changes such as peer and self-assessment.

Consider starting with one technique, and give it the time and practice required for it to become habitual.

Perhaps consider one thing that you need to stop doing in order to make time for the new technique.

What does AfL look like for teachers?

AFL is an ongoing and integral process within teaching and learning. As teachers ask questions, monitor independent activity, and engage in dialogue with students, they are informally assessing students' understanding and determining how to respond. In an AfL classroom, students are continually demonstrating their learning, usually in an explicit way directed by the teacher. Discussion, observation, and reviewing of students' work through structured learning opportunities enables AfL.

Teachers can use assessment information in the planning of future lessons, and during interactions within the lesson being assessed. For example, a teacher uses students' responses to questions to adjust the course of a lesson, or to include remediation activities and corrective instruction after a sequence of teaching.

AfL example

A sixth-grade [year 7] class has been learning about different kinds of figurative language. In order to check on the class's understanding, the teacher gives each student a set of six cards bearing the letters A, B, C, D, and E. On the interactive white board, she displays the following list:

A. Alliteration

B. Onomatopoeia

C. Hyperbole

D. Personification

E. Simile

She then reads out a series of statements:

1. He was like a bull in a china shop.

2. This backpack weighs a ton.

3. He was as tall as a house.

4. The sweetly smiling sunshine. . .

5. He honked his horn at the cyclist.

As each statement is read out, students have to hold up letter cards to indicate what kind of figurative language they have heard. The teacher realises that almost all the students have assumed that each sentence can have only one kind of figurative language. She points out that the third sentence is a simile, but is also hyperbole, and she then re-polls the class on the last two statements, and finds that most students can now correctly identify the two kinds of figurative language in the last two statements. In addition, she makes a mental note of three students who answer most of the questions incorrectly, so that she can follow up with them individually later. *(Wiliam, 2011, p. 11)*

Five steps to implementing AfL

1. **Prime students first.** Let the class know that you will be conducting the lesson in ways that they might be unfamiliar with. Explain that the purpose of assessment is for you to see how they are going in their learning and how you can help. Tell students that in your class learning is less about getting the right answer and more about their capacity to express and discuss their own understanding.

2. **Plan classroom activities that will elicit evidence of learning.** Think about your 'opening move' and spend time framing questions which will explore the critical understandings. These might include:
    *   recap quizzes
    *   concept maps
    *   brainstorming and recording students' ideas on a whiteboard
    *   journal writing
    *   role play
    *   drawing understanding or writing a sentence on an 'exit-card' handed in at the end of the lesson
    *   holding up fingers or number cards in response to mathematical problems.

3. **Engage rich, thoughtful and reflective dialogue focused on evoking and exploring students' understandings.** Use open questions, phrased to invite students to explore their thinking, and ask students follow-up questions to clarify, explain, elaborate, and suggest connections and applications.

    Allow more time for thinking — extend pauses after your questions and after students' contributions.

    Find ways for all pupils to have an opportunity to think and express ideas (consider paired or group discussion, or a choice of responses to vote on, or asking all students to write down an answer). Invite students to expand on or argue against another student's answer before responding yourself. Write questions such as "How do you know?" or "Why might this be incorrect?" and give students time in class to write a response. Be confident and flexible to explore unexpected answers.

4. **Develop classroom routines that enable you to have individualised, one-on-one conversations with students.** Use dialogue to respond to and reorient students. For example, asking "Are your characters going to be talking or will you just provide a caption at the bottom?" enables the student to maintain ownership of the plans for improvement while also being guided into appropriate actions for improvement.

5. **Consider the cultural and linguistic aspects of assessment.** Be sure you are assessing skills and knowledge rather than students' literacy skills or the task's cultural interpretations. Understand students' cultural and linguistic backgrounds to ensure feedback is given appropriately.

...and where you could go wrong

- Not pausing long enough to get students to think or continue expressing ideas.

- Asking rhetorical questions or answering your own questions. Students soon learn not to bother thinking about a response if they know you are going to answer it anyway.

- Directing the student to the correct answer. Over time students work out they are not required to think out their own answers, but only to guess what the teacher expects to hear.

- Relying on eager hand-raisers to fuel discussion. Develop expectations for all students to engage with questions, and consider ways to randomise the way you call on students.

- Not asking follow-up questions to probe students' thinking further. Consider asking students why or how they came to their answer.

- Comparing students' performance with that of other students; instead compare current performance with previous performance.

- Wasting time on record-keeping. It is unlikely there is much use in recording formative assessment.

What does AfL look like for students?

Students require knowledge of assessments, as well as the skills, strategies, and dispositions to use that knowledge. Students that are 'assessment-capable' are able to recognise and assess their own learning, interpret feedback and make "what next?" decisions, and adjust their actions or goals accordingly. They inquire into their performance, asking questions such as "Why did I get this answer wrong?" or "What am I doing that is incorrect?" They use feedback beyond that of the teacher, including self-and peer assessment, and direct feedback from computer-based technologies.

The teacher develops a culture in which students are encouraged to feel deeply accountable for their own learning, and supports students to be motivated and effective autonomous learners, over time gradually giving more control to students to self-regulate learning.

Students can use assessment information to plan how to carry out a task, to adjust their work as they go along, or retrospectively make changes to submitted work. However, AfL is not just about providing students with feedback about current achievement (this is associated with only modest benefits). Its main focus is on improvement. Ideally, assessment information enables students to evaluate how good particular strategies are for meeting their learning goals, and to adjust them accordingly. When students do so, the effects on learning can be profound.

Eleven strategies for developing assessment-capable students

1. **Clarify learning goals and success criteria.** Assessment requires reference against something, a standard of achievement or goal for learning, so that it can provide information about the gap between current and desired performance. Make expected learning outcomes explicit through sharing (or co-constructing with students) learning goals and success criteria. Make goals worthwhile, meaningful and challenging, and talk about why this learning is important.

   Use rubrics, worked examples, and exemplars which illustrate the success criteria, and promote focused discussion to clarify what constitutes quality work. It is usually more effective if students help set the criteria. For example, ask students to analyse a set of exemplars and determine what makes them effective in order to generate success criteria for their own work. Or brainstorm with students what might be important in a given learning intention or activity (such as reading aloud to others). Group common ideas together, and display, use and regularly revise them.

   Make sure the language of goals and criteria is accessible and meaningful. Remind students of expected components in their work through verbal prompts and posters, checklists, thinking routines and graphic organisers.

   ### Example: Co-constructing success criteria for writing summaries

   Students were led through the co-construction of assessment criteria for writing summaries. Then in small groups they were asked to differentiate among five exemplars of summaries of the same article using the criteria they developed. Students had to assign a level of achievement to each exemplar — from level 1 representing a weak text, to level 4 representing an excellent text —and explain their reasoning.

   The goal was to help students develop internal standards for quality work, and support their capacity to make better judgments about their own work. Next, using their co-constructed assessment criteria, students assessed their own summary.

   Students were later asked to read two examples of feedback for the level 1 exemplar and to select the feedback that was most effective. Subsequently, students determined the essential components of effective feedback (e.g., identify strengths and weaknesses, suggest a strategy to improve upon a weakness) and practised their newly honed skill on the level 2 exemplar. *(Bourgeois, 2016, p. 353-4).*

2. **Create a positive climate.** Make your classroom a non-comparative, non-competitive environment, free of risks to self-esteem, based on co-operation and dialogue. Frame making mistakes and risk taking as positive behaviours and valuable learning opportunities for other students. Normalise mistake making and confusion by modelling your own learning and problem solving. Teach students that seeking feedback from oneself and others is a hallmark of a successful learner. Encourage students to work in friendship pairs and friendship groups.

3. **Integrate feedback that enables the student to adjust their actions so they can improve.** Provide substantive, ongoing opportunities for assessment conversations with students. Link feedback to the desired goal and give information about the students' present position in relation to the goal, and what they need to do to meet the goal. Ensure feedback is clear and specific (e.g. "Make sure you give a few hints at the beginning of your story about who is responsible for the crime" rather than "Review the example of an introduction given in class"). Use feedback to enable students to make their own decisions about how to improve their work. Circulate feedback among learners so all learners benefit.

4. **Teach students how to access, interpret and use assessment evidence.** Discuss why and how students can go about seeking evidence to improve their learning. Discuss what kinds of feedback are most helpful, and why it can sometimes be difficult to assess their own and others' work. Give students time to give, receive, and reflect on descriptive feedback (and an opportunity for discussion with the teacher), as well as to set and reset their goals and success criteria.

5. **Encourage students to use assessment information to improve their work during its production.** Assessment information needs to be available to students while they are working so that students can adjust their performance/production of work. Collaboratively set and check visible intermediate goals towards outcomes as the lesson proceeds. Review student-generated success criteria – is there anything that needs to be added, changed, taken away?

6. **Give students time to revise a piece of work once they have received feedback on it.** Emphasise that good outcomes are about effort, and thoughtful improvement, rather than getting it right first time.

7. **Engage students as owners of their own learning.** Encourage students to decide what to do to improve their performance and devolve responsibility to them. Consider offering a selection of appropriate moves or strategies. Attempt to create a dialogue with students rather than telling them what they need to do. Direct students to other students who are on the right track. Involve students in decisions about timeframes, for example: "There are five minutes to finish – raise your hand if this is not enough time". Ask students to collect and organise their own evidence of learning, and to thus be accountable for their learning.

8. **Build students' assessment skills through peer assessment opportunities.** Peer assessment enables students to develop the skills they need for self-assessment. Students can be more objective appraising someone else's work, as well as gain insights into different ways to approach tasks, and their common problems. Embed peer assessment opportunities into instruction, and teach and model strategies for peer assessment. Show students collections of samples or exemplars and ask them to record what they think is important in the work, as well as one or two things that could be done to improve the work. Ask students the kinds of things they need to look for in other pupils' work. Create loops of dialogue and feedback around the class.

9. **Create occasions for students to showcase their work to other audiences, including their parents and other classes,** through special events or simply by giving students their own personal display area on a bulletin board. Engage students in selecting their work for presentation, and invite them to reflect on what they want this audience to notice about their work. Ask the audience to give some brief feedback – perhaps two things they really liked and one suggestion for improvement.

10. **Provide opportunities, and support, for students to engage in self-assessment.** Teach students the language to describe, discuss, and evaluate learning. Display exemplars and ask them to compare their work to the exemplars and decide which sample most resembles their work and why. Support them to interpret and apply success criteria, and give students feedback on their self-assessments. Help students to use self-assessment data to improve their performance. Provide sufficient time for revision after self-assessment.

11. **Use summative assessments for formative purposes.** For example, ask students to analyse past papers, or to set questions and mark answers. Get students to reflect on their work in order to plan effective revision, or to rework examination answers in class. Ensure students are the beneficiaries, rather than victims, of summative tests.

...and where you could go wrong

- Being the only person in the classroom who knows what the class is trying to learn and what it should look like – this severely hampers students!

- Giving numerical scores or grades alongside feedback; students ignore comments when marks are given. Abandon giving marks so that students will better engage in improving work.

- Testing at the end of a unit or module when it is too late to work with the results.

- Attributing performance to a lack of ability rather than a lack of effort. Comparisons between students and competitive environments encourage low-achieving students to view themselves as low ability, and hence reduce effort.

How can AfL support students' motivation?

What assessment information is gathered and how, and the ways in which it is subsequently used, impacts upon learners' willingness, desire and capacity to learn. Motivation and self-esteem are crucial influences in learning, and without students being motivated to improve, deep and significant learning is unlikely. Feedback needs to be presented in a form that motivates students to respond by increasing their effort or their aspirations. If not framed positively, feedback can lead to negative responses, in which students prioritise their emotional well-being over the tensions and difficulties of learning and making mistakes.

The ways in which students respond to assessment information and feedback depends on their experiences of learning and assessment, their identity or self-concept as learners (the learning reputation they have acquired over time, and how they are viewed by their peers and teachers). Negative views of their capabilities need to be addressed. Positive views of themselves as learners can be developed through AfL, when students are taught how to make their own assessment decisions and come to understand their learning gains.

Eight AfL practices that motivate students

1. **Build positive relationships with students to improve participation.** Achieving goals and meeting success criteria leads to students developing a sense of themselves as capable learners.

2. **Consider how an assessment is going to assist students to learn,** and ensure it does so.

3. **Acknowledge students' motivation, experiences, and interests in setting meaningful and challenging goals with them.** Goals can be long-term, describing intended progress over a term or year, or short-term, identifying the next step in the learning or how to improve a specific piece of work. Give students opportunities to set their own goals, or explain why particular teacher-set learning goals are important for students.

4. **Create explicit success criteria and use these as the basis for descriptive feedback.** Students can appreciate feedback that is designed to help them meet their goals. Make feedback descriptive and focused exclusively on the quality and content of the student's work.

5. **Use questioning and feedback that supports a student's self-efficacy,** so that the student believes they are leading the discussion and solving the problem. This makes students more engaged and increases motivation.

6. **Set challenging but attainable targets** and get students to keep a record of their achievement to increase their sense of self-efficacy.

7. **Show a range of samples** rather than only exemplars of the highest level, so that all students can see samples close to their working level.

8. **Promote student ownership of learning and student self-assessment to increase engagement.** Use assessment as a means to empower learners. Give students access to their own assessment records, and encourage them to engage with them. Involve students in all kinds of feedback loops. By delivering feedback to others, students become more receptive to receiving feedback. For a positive impact on self-esteem, create opportunities for self-assessment that demonstrate improvement.

...and where you could go wrong

- Making AfL teacher-centred rather than student-centred. AfL has to engage students in self-evaluative practices.

Teachers' checklist: How assessment capable are you?

Are you assessment-literate? Do you have knowledge of ways of assessing what students know and can do, and know how to interpret the results of these assessments? Do you know how to apply these results to improve student learning? Are your students benefiting from your assessments?

Teachers must have assessment capability in order to guide and support their students' assessment capability. Teachers who are assessment capable (like assessment-capable students) take ownership of their learning, recognise areas for improvement, and take steps to improve their assessment capability. The following quiz might help you to identify how well versed you are in quality assessment practices, and to identify where you might changes in order to improve.

How often do you...	Rarely	Sometimes	Often
Talk about goals and standards with students:			
Share your understanding of quality with students, and provide focused feedback about their work? *i.e. sharing exemplars or samples of previous students' work so students can see a range of ways to produce quality work*			
Adapt teacher resources for students to understand, by deconstructing criteria and descriptors, interpreting what they mean and applying them to real examples of work? *i.e. explaining learning intentions in student friendly language ""We are learning to count money so that when we go shopping we can check our change")*			
Explicitly teach students how to access and use materials (such as rubrics) that detail criteria and exemplify quality? *i.e. by encouraging students to create their own rubrics based on their analysis of quality examples*			
Model how to judge performance against success criteria or assessment criteria? *i.e. working through assessing an example or exemplar as a class*			
Provide opportunities for students to evaluate the quality of their work:			
Value mistakes as opportunities for growth? *i.e. telling students that their mistakes are interesting and useful for class learning; explore mistakes with the class showing interest in the reasons for mistakes and how they can be prevented*			
Enable students to take responsibility for themselves as learners *i.e. by reviewing their work and deciding what action to take to improve, or by deciding for themselves what evidence to produce to demonstrate meeting a goal*			

How often do you...	Rarely	Sometimes	Often
Explicitly teach self-management skills? *i.e. discussing how to manage distractions and what to do if you get stuck*			
Explicitly teach students to review and evaluate their abilities, knowledge states and cognitive strategies? *i.e. using self-assessment activities to focus on attitudes (what the student enjoyed), knowledge gained (what do they know or can do now) and how it has been learnt (what helped them to learn it)*			
Devote time, support, and opportunities, in the context of learning, to help students plan, problem solve, and evaluate? *i.e. getting students to spend time in groups examining the characteristics of examples; sharing problems that arise with the whole class and brainstorm solutions; providing dedicated improvement and reflection time to create and act upon feedback*			
Share your teacher knowledge about the skills, strategies, and resources needed to carry out a task effectively? *i.e. offering processes on posters or providing scripts for how to complete a task successfully, or using worked examples with the class*			
Explicitly teach students how to self and peer assess and how to give and act on feedback? *i.e. having the class generate criteria for assessment and practising focusing feedback on these; using frameworks or formulas (such as "two stars and a wish") for giving feedback*			
Provide students with sustained and supported experiences in discussing/questioning and improving their work? *i.e. providing time and frameworks for peer-assessment, engaging students in assessment conversations with you, and giving time for responding to and acting upon feedback*			
Give students the specific language they might need to describe, discuss, and evaluate their learning? *i.e. by making lists of what counts as good learning (what is important when we read out loud, what makes a good research report)*			
Model effective problem solving approaches and demonstrate being a learner yourself?			

How often do you...	Rarely	Sometimes	Often
Provide opportunities for students to modify work in response to assessment information:			
Help students to learn how to monitor and improve the quality of their work both during and after its production? *i.e. checking their progress against the learning intentions and success criteria for the lesson*			
Provide a variety of exemplars which illustrate what is expected of the students? *i.e. showing students the different ways that success in the learning intentions can be reached*			
Give explicit teaching of fix-up / improvement strategies? i.e. checking punctuation by reading out loud, adding adjectives to a narrative, labelling drawings etc.			
Provide time, opportunities, and encouragement within the school day to improve work during its construction? *i.e. beginning sessions by having students read and respond to feedback, structuring activities to include reflection time or questions*			
Help students to identify where and when to make improvements? *i.e. through guided questioning or having students check their work against scripts and rubrics*			
Provide opportunities for evaluative conversations? *i.e. discussing success criteria or a students' self-assessment, and setting new goals or working out improvement strategies, or dialogue with students through questions and responses in written feedback*			

Adapted from Booth,B., Dixon,H., & Hill, M. F. (2016). Assessment capability for New Zealand teachers and students: Challenging but possible. SET (2), 28-35. Retrieved from www.nzcer.org.nz/nzcerpress/set/articles/assessment-capability-new-zealand-teachers-and-students-challenging-possible