



On-the-fly feedback Teacher reflections UK

On-the-fly assessment is what happens in classrooms when teachers use evidence from the interactions they have with individuals and groups of students to inform the next stage of teaching and learning. It is therefore a dynamic form of assessment that relies on how well the teacher collects and responds to evidence from classroom talk. The teacher reflections presented here represent a selection of excerpts from our teacher self-reporting tool, teacher reflections on teacher meeting days, and teacher post-lesson interviews. The excerpts presented here provide a sample of the views embraced by primary and secondary science and secondary mathematics teachers.

Strengths and weaknesses when using on-the-fly feedback

“It is quick and immediate so that interventions can happen as and when they are needed. The quality of the feedback is high because it is so personal to the individual/groups with whom you are speaking.” – Secondary Science Teacher

“Instant feedback and judgements possible that enable you to move learning in a particular direction. Find out things in discussion that would never appear in a final product.” – Secondary Science Teacher

“You need to be time and group conscious; the needs of one group may reduce the interactions with other individuals / groups.” – Secondary Science Teacher

“Really need to think about what you are assessing and not get distracted from that task. Not likely to be able to see a whole class and assess within a single lesson.” – Secondary Science Teacher

Opportunities and challenges when using on-the-fly feedback

“The teacher learns much about the students’ thinking processes and reasons for responses. With probing it avoids the problem of students who have the right answer but for the wrong reason. The direction or challenge of the inquiry can be altered based on the teacher’s assessment of the understanding and planning of that group.” – Secondary Science Teacher

“(Student) differentiation -providing varying levels of support, guidance and additional challenge to different students according to the interactions.” – Secondary Mathematics Teacher

“Phraseology of questions: The teacher needs to have thought about the types of questions that they will ask and what sort of responses these will elicit. With the routine use of this method this can become instinct. However, even an experienced practitioner benefits from considering questions and the intended and unintended learning beforehand.” – Secondary Science Teacher

“Getting to all students and recording such a large volume of information.” – Secondary Mathematics Teacher

Resources to help teachers overcome the challenges of using on-the-fly feedback

“A clear assessment framework for each task so that data can be easily populated into a template.” – Secondary Mathematics Teacher

“Resources looking at how to ‘store’ data or track progress.” - Secondary Science Teacher



“(A bank of) common misconceptions for specific inquiries. A bank of open-ended questions that other teachers have found effective. Pairing with another teacher to compare experiences.” – Secondary Science Teacher

Using On-the-fly feedback to capture assessment evidence during inquiry based lessons requires the following considerations:

A particular learning environment that promotes learner autonomy, risk taking and lots of learner talk and interactions

“(Be prepared for) a level of noise in the class (teacher must reinforce expectations) as the children will be encouraged to talk about the science that they are investigating. “ – Primary Science Teacher

“(Be prepared for)...noise, mess, things (inquiries) going wrong-teach them to evaluate this, chaos and embrace it” – Primary Science Teacher

“My class are much more confident and not afraid to make mistakes. They are able to come up with their own investigative questions...they talk more.” – Primary Science Teacher

“My class now learn science through exploratory talk with each other. They always were given time to talk (discuss with your partner what do plants need to grow-1 minute.) but now they are given time to question (respectfully) the comments of their peers.” – Primary Science Teacher

“I am more prepared to let the students lead and trust them. Before was shutting it down but now it is different.” - Secondary Science Teacher

“There was a change in focus. Practical (lessons) were about how that fits the curriculum key content goals. Now it is more about the genuine inquiry, the process, the thinking, asking scientific questions, and planning how to answer them.”- Secondary Science Teacher

Teacher awareness of the affordances and constraints of conceptual knowledge

“ ... loved the bubble activity even though I was more scared of that because I didn't know the science behind it...it worried me in terms of the questions they might ask me. ‘What makes the bubbles big and the molecules?’” - Primary Science Teacher

“Teachers should be prepared to approach the inquiries with an open mind and not expect to know all the science behind inquiries...It's great fun!!!” - Primary Science Teacher

“I think a lot of us fall into the trap of developing scientific knowledge as opposed to developing those behaviours and thinking explicitly about what they are doing and why they are doing it, and how they are going to improve ...and that is what scientists do” – Secondary Science Teacher

Teacher awareness of the delicate balance between using convergent and divergent questioning

“(You need to think about)...a more balanced approach-acting as a facilitator, not an imparter of knowledge” - Primary Science Teacher

“Questioning has become more focused allowing the children more thinking time and using their answers to trigger responses from others.” - Primary Science Teacher

“I have always asked lots of questions and the challenge now is to get the children to start asking the questions and not always to expect a straight answer.” - Primary Science Teacher



"...I think I have got used to now things not working...I have got this picture in my mind of how things should be and what I would really like them all to do. It never happens...this has helped me overcome that fear of failure..." - Primary Science Teacher

"Listen and observe before intervention to ensure appropriate questions. Asking questions and making statements that stimulate thinking as opposed to providing answers." - Secondary Science Teacher

"When you're always going around, you don't want to give them the right answer, but you don't want to leave them just struggling, totally stuck...We should have the courage to go ahead and attempt anything and trust it will develop the students such that they will be able to do the exam with greater skill, but we are very weary each time a nice idea comes back we probably shut it down whilst encouraging the child because we know deep down that it is wrong..." - Secondary Science Teacher

"The big challenge for me is learning to step back. Obviously I know what might be the right answers and I can guide the students to do this or to do that, and perhaps I was just too quick to do that in the past. And now I step back and listen to them so much more and I find out they know more than I thought they did." - Secondary Science Teacher

A focus on specific inquiry competencies

"Teaching children how to 'write a good conclusion' and make a 'prediction' was very challenging for me at first, until I started writing conclusions for myself and making predictions on inquiries that were unfamiliar to me. Putting myself in the children's position is now a starting point in all my lesson." - Primary Science Teacher

"I am now identifying the skills that the children are using during their investigations and realise that all skills are being used throughout. New questions arise constantly and rich conversations lead to new learning. Talking is key." - Primary Science Teacher

Focus on when and how to capture interactions on the fly as assessment evidence

"Think carefully about feedback and next step." - Primary Science Teacher

"Give yourself and the children time to reflect on the scientific inquiry and keep records (photographic evidence is the best as it captures how the children learnt a particular unit). For example, in the bubble mixture experiment I have great video footage and pictures of the children's efforts and the size of bubbles they created and the on-going discussion/predictions/excitement surrounding the inquiry." - Primary Science Teacher

"I am less concerned about the numbers that I can write in a book and report to someone. I am much more focused on the assessment that then leads me to give information to the student and then the student is using that information in a more meaningful way." - Secondary Science Teacher