

When we assess students in mathematics what are we assessing?  
**Mike Ollerton** has an interest in, and concerns about, assessment.

## BUTCH CASSIDY, ASSESSMENT AND THE SUNDANCE KID

In May 1992 a group of Open University higher degree research students, together with tutors and supervisors, met for a day to share their current mathematics education research work. We presented each other with ideas and issues to consider, discuss and work on.

One of the issues in which I am interested is assessment and how the current climate of testing is undermining curriculum development, effective learning and holistic methods of assessment.

I chose to show a clip from the film *Butch Cassidy and the Sundance Kid* and afterwards asked everyone to write for two or three minutes about the issue of assessment in response to the extract from the film.

The scene I showed is where Butch and Sundance are looking for employment at a Bolivian gold mine owned by Percy Garrett.

Here is a transcript of the scene:

*Percy* Could I see that?

[pointing to Sundance's gun]

Fairly nice looking piece. Can you hit anything?

*Sund.* Sometimes.

[Percy takes the gun and throws a stone a few yards away.]

*Percy* Hit that.

[Sundance takes his gun back off Percy and prepares himself to shoot by spinning the gun around his finger and replacing the gun in his holster.]

*Percy* No no son, I just want to know – can you shoot? – Shoot.

[Percy takes the gun back out of Sundance's holster and places it firmly back into Sundance's hand, aiming it in the direction of the stone for him. With the gun in his hand Sundance attempts to shoot the stone – and misses. Butch looks bewildered and Percy walks away in disdain.]

*Sund.* Can I move?

*Percy* Move? What the hell do you mean, 'move'?

[Sundance half turning towards Percy, replaces his gun in its holster and as he wheels around he pulls out his gun and proceeds to shoot the stone once and then again.]

*Sund.* I'm better when I move.

*Percy* Yeah!

I believe that the scene provides many analogies to testing and assessment. Here are some of the comments I received during the meeting. The first three responses refer to the excerpt as a whole:

"Percy's test was inappropriate because in narrowly defining the task he did not allow the 'candidate' to show what he could do."

Assessment should allow all pupils to demonstrate their abilities whatever way is most appropriate, but at the moment, nationally organised testing is not the most appropriate way.

"Percy's test was irrelevant because he was testing Sundance's ability to hit a stationary object, whereas in real life he would be employing him to shoot at moving bandits who in reality would be firing back."

Meaningful assessment takes place in context. If narrow, atomised skills are tested out of context then we have no guarantee that the same skill can be achieved a day or a week later in a different context to that of the examination room. People demonstrate their knowledge and ability to apply particular skills when they are actively involved in broader, more meaningful contextualised tasks.

"Percy's test eliminated many of the variables that Sundance would have been used to and would have needed in order for him to show his true potential. Because of the stress of being placed in a sterile environment Sundance failed to show his true potential."

Likewise many children fail to perform adequately, because of the stress caused by the over-importance placed upon testing which is

narrow, fragmented, decontextualised and at odds with the type of teaching methods that draw the best out of them as learners.

Here are some of the responses that picked out specific incidents or pieces of dialogue:

“Can you hit anything?” (Percy)

There is an image here of children being asked to hit an attainment target, which is unproblematic, unchanging and for all events.

“Sometimes” (Sundance)

As Sundance rightly points out, ‘sometimes’ he can hit a target ... but ‘sometimes’ he can’t.

By setting a test, we are removing the possibility for many children to show what they can do ‘sometimes’.

I find it an appalling notion that anyone believes they can write questions that are going to assess, effectively and fairly, large numbers of children throughout the country ... doing tests based on certain spurious levels ... on the same day ... at the same time.

[Sundance takes his gun back off Percy and prepares himself to shoot by spinning the gun around his finger and replacing the gun in his holster.]

Percy No no son, I just want to know – can you shoot? – Shoot.

[Percy takes the gun back out of Sundance’s holster and places it firmly back into Sundance’s hand, aiming it in the direction of the stone for him.]

Percy insisted that Sundance carries out the task in a certain way, and in an unnatural context, as far as Sundance was concerned. This parallels the phoney contexts which examiners use for some of the questions they design or which we use as a reason for testing certain pieces of knowledge.

By focusing on the explicit performance of certain events in specific ways we ignore the fact that the same outcomes can be achieved differently.

It is important to give children the opportunity and the space to perform tasks in ways most appropriate to themselves. Assessing what children can do in a straight jacket will not show their true attainment.

“Can I move?”

Sundance needed to be able to prove himself by changing the way that the test was administered. But tests do not allow children to do this.

What sort of a chance does the person being tested have? How well are the purposes of assessment understood by those who are tested, or by those who are testing?

There are several issues here, not the least of which is the effect that testing will have upon the curriculum. Effective, long-term learning occurs when skills and knowledge are acquired in broad frameworks, through real-life encounters and in problem-solving contexts.

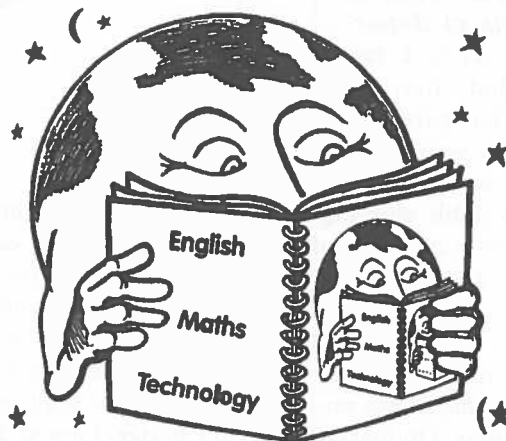
The real focus of education, where the learner should be encouraged to *ask* questions in order to seek knowledge and enlightenment, is blurred by anonymous writers of tests asking the kind of questions, the answers to which are of real interest to no-one except the compilers of league tables.

I am not particularly surprised by the recent furore over the calling into question by HMI of the reliability of examining standards. It is, though, the question of testing itself which should be under consideration, and whether testing is a useful way of finding out what anyone knows and can do. I firmly believe that the days of end-of-course, timed tests ought to be numbered. Our education system should be based largely upon the ongoing work that students produce, and where the assessment criteria used are broadly based, and are integrated with, and a positive support to, learning.

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