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Effective Lesson Observations in the Mathematics Classroom

Mohammed Basharat and Alistair Bissell

Different approaches

- Line Manager Observations
- Peer Observations
- External Observations
- Lesson Study



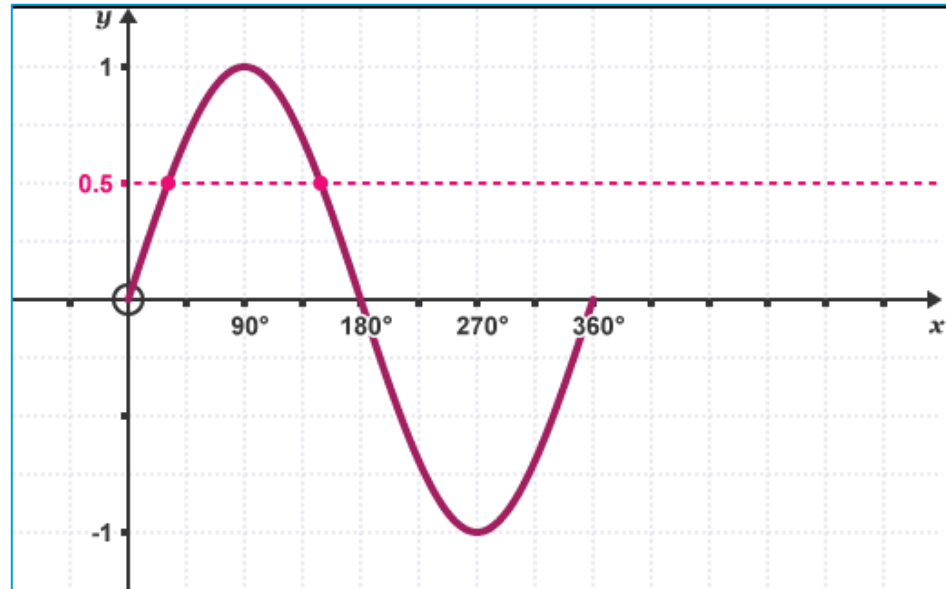
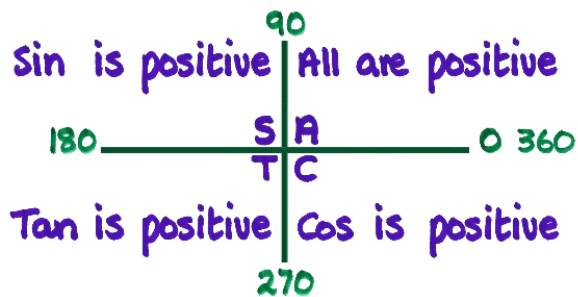
Some principles
which have
resonated with
me:

- Observers are trained in observation and feedback
- Feedback is “supportive and participatory” (Pichler 2012)
- “Negotiated assessment” (Gosling 2000)

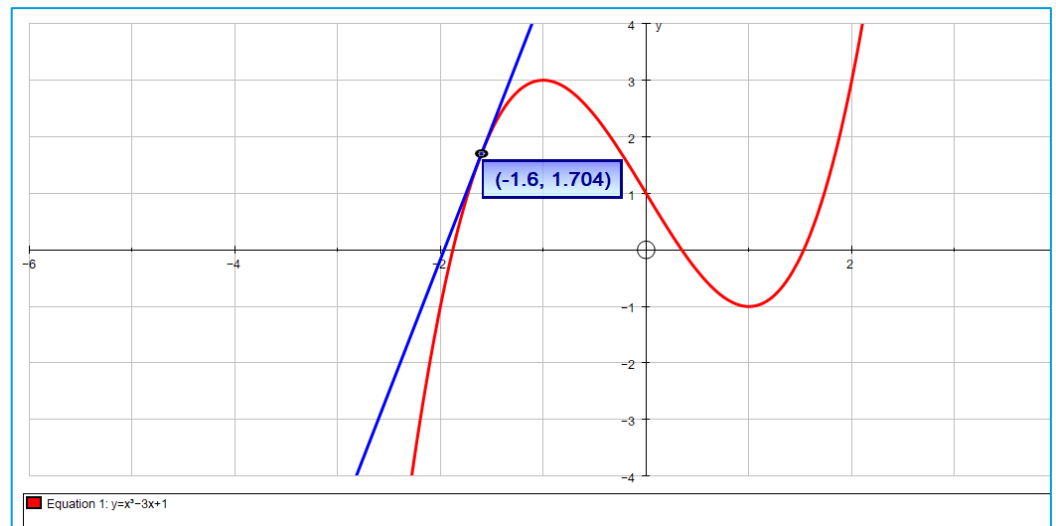
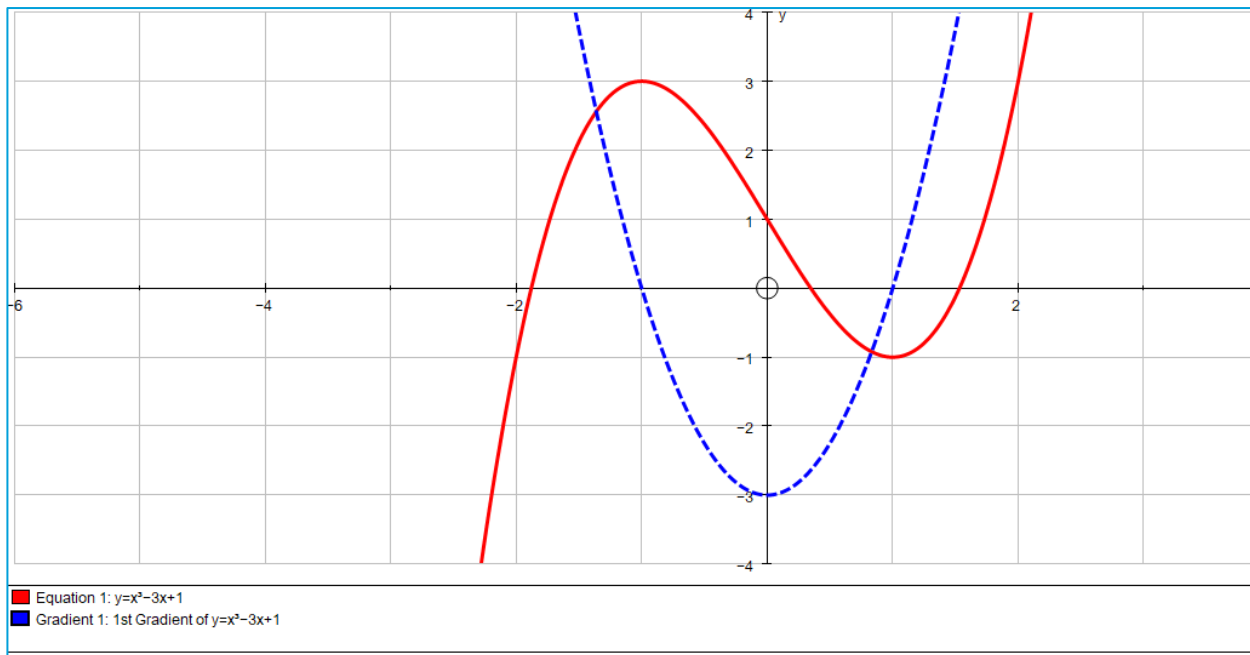
- Trust, 'done with' and not 'done to' (Shumacher 2012)
- Ownership (McMahon et al 2007)

- Subject Specialism - The literature shows that content-specific practices tend to have more impact than generic practices on student learning”
(Coe et al, 2014)

Use 'CAST' diagram to find the solutions
by going around and around.



| RULES FOR TRANSFORMATIONS OF FUNCTIONS | |
|---|--|
| If $f(x)$ is the original function, $a > 0$ and $c > 0$: | |
| Function | Transformation of the graph of $f(x)$ |
| $f(x) + c$ | Shift $f(x)$ upward c units |
| $f(x) - c$ | Shift $f(x)$ downward c units |
| $f(x + c)$ | Shift $f(x)$ to the left c units |
| $f(x - c)$ | Shift $f(x)$ to the right c units |
| $-f(x)$ | Reflect $f(x)$ in the x -axis |
| $f(-x)$ | Reflect $f(x)$ in the y -axis |
| $a \cdot f(x)$, $a > 1$ | Stretch $f(x)$ vertically by a factor of a . |
| $a \cdot f(x)$, $0 < a < 1$ | Shrink $f(x)$ vertically by a factor of a . |
| $f(ax)$, $a > 1$ | Shrink $f(x)$ horizontally by a factor of $\frac{1}{a}$. |
| $f(ax)$, $0 < a < 1$ | Stretch $f(x)$ horizontally by a factor of $\frac{1}{a}$. |





[Home](#) > [Teachers](#) > [Teaching A level Mathematics \(TAM\)](#) > [The TAM course](#)

The TAM course

This course is for teachers in state-funded schools and colleges in England. All participating teachers must be teaching AS/A level Mathematics throughout the academic year 2018-19.

The course fees are £600 but schools and colleges of participants are entitled to £900 (or £1200 for teachers from schools in Opportunity Areas) on completion of the course in recognition of the support they give to their colleague.

Participants are required to take an active role in eight study days, spread across the year, focusing on A level Mathematics subject knowledge and pedagogy. Course tutors carry out two school/college visits to each participant to observe and support his/her A level teaching. In addition, participants study the content of A level mathematics, from a teaching and learning perspective. Participants have access to an extensive website of teaching and learning materials and this access continues for two years.

Lesson observation feedback

Starting Point:

How can I encourage teachers to reflect on the lesson and help them move forwards in their teaching?

Aims:

To offer examples of feedback and to provoke thought

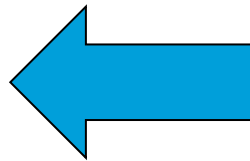
This session:

- Some initial questions
- Three examples of feedback conversations
- Conclusions and issues raised

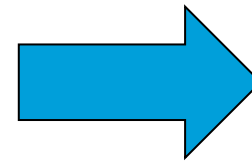
The Great Divide

In a maths lesson:

The maths
the teacher
does



Which is
more
important?

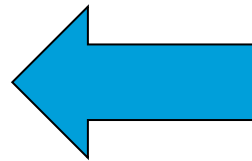


The maths
the student
does

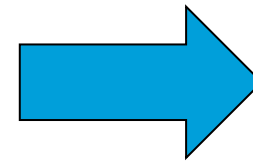
The Great Divide

In observation feedback:

The voice of
the observer



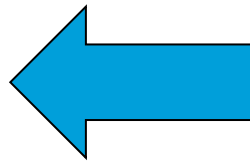
Which is
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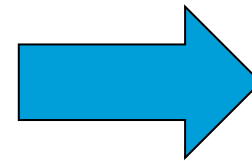
The voice of
the observed
teacher

The Great Divide

The
observer
makes
judgments
about the
lesson



Which is
more
important?



The
observer
avoids
making
judgments
about the
lesson

My Initial Questions

- Should feedback be about *my voice* (the observer) or about *their voice* (the teacher)?
- What is the role of my own judgments about the lesson?

Example 1

I asked the teacher to choose an interesting moment from the lesson that we could talk about in more detail.

Example 2

I told a teacher that they asked questions and then weren't interested in what the students answered.

Example 3

I asked a teacher to think of a student that they've taught who is particularly successful at maths. What does that student do that separates them from other students?

Some possible conclusions

- Staying with the detail is important. Avoid *premature evaluative talk* – challenge this.
- The relationship with the teacher is important.
- Does the teacher have an image of how they would like their classroom to be?
- Listening is important – but try to be aware of what you are listening *for*
- Listening for a purpose, conviction, energy?

Questions arising

- Is my role to develop this individual lesson, or to enable the teacher to develop their own practice?

About MEI

- Registered charity committed to improving mathematics education
- Independent UK curriculum development body
- We offer continuing professional development courses, provide specialist tuition for students and work with employers to enhance mathematical skills in the workplace
- We also pioneer the development of innovative teaching and learning resources