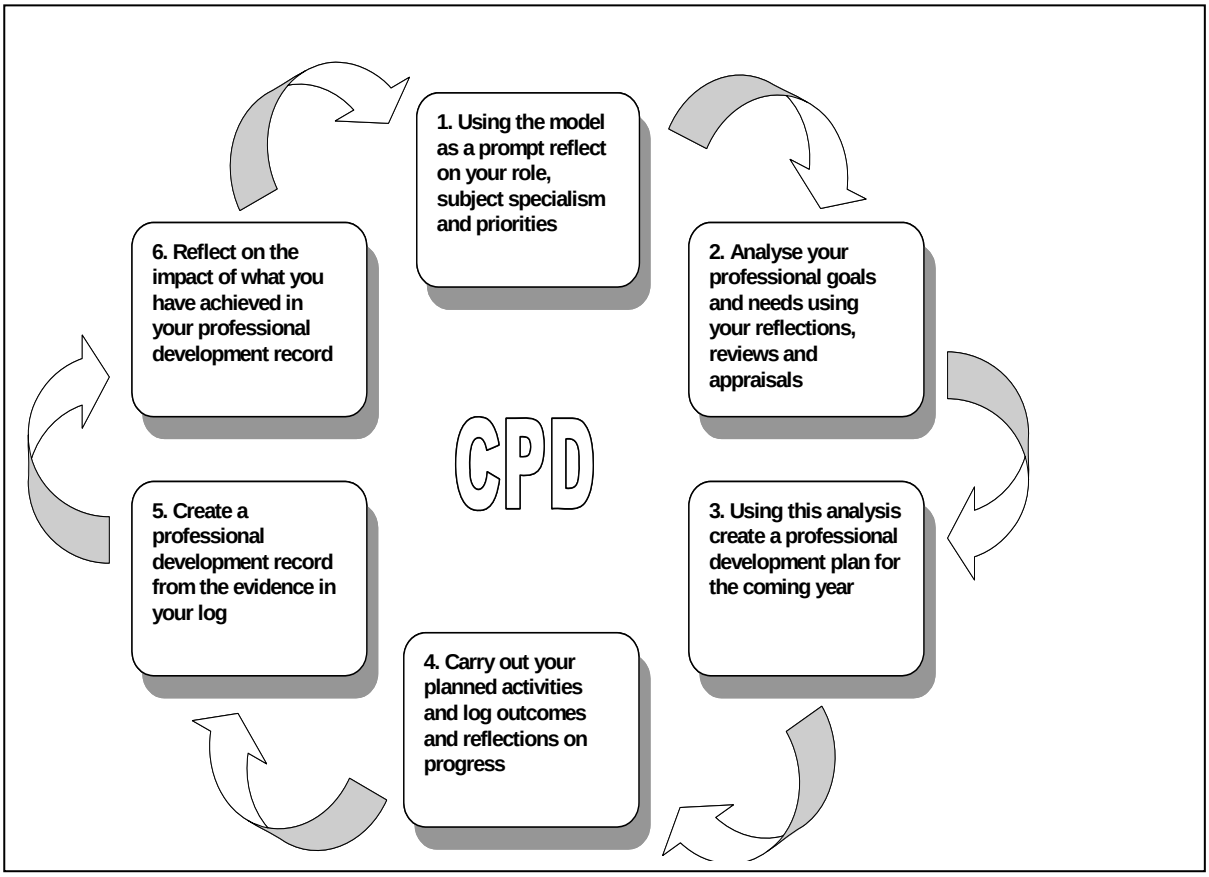
## Supported experiments

### Tower Hamlets College

Trying out new approaches or strategies in our teaching is invaluable in helping us to grow and improve as teachers. However, this process is enhanced by spending time reflecting on the whole process and documenting our thoughts and reflections. This not only helps us to clarify thoughts but it can contribute to your own personal reflective diary and form part of your continuing professional development (CPD). It is of course even more powerful if you can work collaboratively with others in working through this process.

**Institute for Learning CPD cycle**




### Using Mathematics sessions as a starting point for CPD

- Select a group you will be teaching in the near future and think about the Mathematics content of a forthcoming topic.
- Discuss your ideas with a colleague who has specialist Mathematics knowledge.
- Explore together “Improving Learning in Mathematics” and “Thinking Through Mathematics” to identify a resource that you can adapt.
- Plan a session that uses the adapted activity to teach the vocational topic but check with your colleague that the Mathematics content remains intact.
- Record your thoughts on the process as part of your CPD record.

| Title: |
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| In this section you should describe what is being planned, who you are working with and what you, your learners and your organisation/college hope to gain from the process. It will also be helpful to give an idea of timescale, and an explanation of why you have chosen this particular strategy or strategies.<br><br>It is particularly important that you also give some thought to how you can measure how successful the strategy is - this will particularly help when it comes to the review process. |
| **What will you try out?**<br>The aim of the lesson is to use Mathematics to prove whether or not a newspaper article claiming “UK whites are a minority in a London classroom” is true or false. The students are to extract the data from the article and use it with a statistical tool, such as pie charts and bar graphs to compare the data. The students are to work in groups and express their side of the argument through a poster.<br><br>**What specifically are you hoping to achieve?**<br>By the end of the lesson, students should be able to construct pie charts and bar graphs and show their working out.<br><br>The main objective is that the students should be able to see that Mathematics is an essential tool to show a side of an argument, especially in the media where statistics are used to prove a point, whether for or against an argument.<br><br>**Which group of learners will you try it out with?**<br>FSMQ use of data for media students.<br><br>**Who can you work with on this project and what can they do to support you?**<br>Nigel (media department) for input on what they are doing for their subjects and what specific Mathematics is required to help develop the student’s knowledge further.<br><br>**How will you evaluate your ‘experiment’ (for example, feedback from learners, self-assessment, peer review and evaluation)?**<br>From the poster presentation, I will be able to determine what the students have learned. There also be a feedback session at the end where the students will get the opportunity to discuss what was covered in the lesson and what they have learned. |
| Date: 22/10/07 |

2. The activity

**Briefly describe the activity**

Students will watch a documentary (since they are media students) where they will be able to observe and discuss how Mathematics is portrayed in the media. This will be followed by a discussion on the documentary. After which, the students will be given the opportunity to look at the headline claiming “UK whites are a minority in London classroom” followed by a discussion on what the article could mean. The article is divided into segments, some showing statistics for London classrooms where, in certain areas, the white students are a minority and others with statistics showing that, nationally, the white students are actually a majority. Students will work in pairs to represent this data through bar charts and pie charts, and then a discussion will follow on what could be the headline for the article and how media uses Mathematics to win an argument.

**An account of what happened**

1. Introduction – why do we need maths in the media? question to the group. Lots of answers offered including selling things, financial, measuring things, creating a better effect.

2. Short film clip showing maths being used in a documentary. Followed by lively discussion about the use of maths in the clip.

3. Article handed out – attached. Group discussion on the headline – what it means and whether it matches the subheading or whether they say two different things – more lively discussion moving towards the conclusion that the two headlines are contradictory. Lots of student engagement.
See handout.

4.Intro to maths – why numbers are important, looking at an example of stats in a local setting including some analysis of how we interpret data , what it tells us, why we need to ask questions, not necessarily accepting things at face value... see PowerPoint.

5. Maths activity – plotting bar and pie charts from the article. Lots of excellent student engagement. The really powerful thing here was that no-one asked why they were doing the task… all seemed focussed and there was lots of good discussion on technique, as well as analysis.

6. Summing up – discussion about what conclusions could be drawn from the session. The media isn’t always telling the truth – need to question.

**Who else was involved and what was their role?**

Nigel – he covered the media aspect such as the documentary.

Date: 25/10/2007

 

You might like to attach a copy of any artefacts used in the session or activity

 

3. Review

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| In this section you should describe any significant events focussing in particular on what went well or not so well, why you think this happened and how you came to these conclusions. You should also reflect on any issue that arose including ethical issues. Include thoughts on what you might do differently next time. You should also focus on what you as a teacher have learned from the process, referring back to your original aims in section 1. How well did the planning process work, and how do you plan to build on this. How do you intend to share these experiences with colleagues? |
| **Feedback and evaluation (based on evidence)**<br>Overall, it was a very successful lesson. Students were engaged and they were happy with the task that they had to do. Since they were working in pairs, they felt confident to ask each other for help and the pairs were differentiated depending on ability, so the students were all challenged.<br>The discussions were very constructive, which showed that the students had opinions of the media and how Mathematics is used. Students were able to support their arguments by using the pie charts and the bar charts that they had constructed from their article.<br><br>**What went well? Why do you think it went well and how do you know that it went well? Are there any particular learner responses you want to highlight?** (for example, learners who are normally lacking confidence, bored or disruptive now responding well, or more able learners progressing to higher levels of understanding or skill. If possible keep a representative sample of the range of responses.)<br><br>Students were happy doing the task, especially since they were working in pairs so they were given an opportunity to discuss their work. It was also easier to differentiate the work which meant all students were challenged according to their ability. Since the Mathematics was related to a topic they were familiar with, the students felt comfortable to give their opinions. Students responded well and they were eager to give their opinion. Since they were doing some cutting and pasting, they thought it was fun!!<br><br>**What have you learned?**<br>I wouldn't normally risk doing a lesson like this where equipment such as scissors and glue is involved, especially with a set who are not interested in Mathematics. This lesson has shown me otherwise; it was an extremely successful lesson and most importantly, they enjoyed it. Most students liked the open discussion so that is something that I can use for the future.<br><br>**Next steps**<br><br>**What will you do next to extend and develop this work?**<br>To develop this work, we could look at different areas of Mathematics in the media, such as; will a scatter diagram show the same information or different? |

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| how is percentage used to prove the argument? and so on. The students could then create their own article with a new headline showing their findings and displaying it mathematically. Since the students are media students, this task may be relevant because it will give them the opportunity to practise their media skills by creating a newspaper and it will also reflect their mathematical abilities because it will show if they have understood how to use mathematical tools. |
| Date: 5/11/07 |
| You might like to attach a copy of any artefacts used in the lesson or activity |