Classroom Strategies for English Medium Teaching and Learning

Slides from Philip Hoare and Paul Stapleton
Our class’s strategy

• We have teachers from:
  – Many different content subject areas;
  – both CMI and EMI schools;
  – different levels of instruction;
  – different levels of schools.

• Not all content in this class will directly apply to you, but much can be adapted for your individual context.
We have only 75 minutes!
Much of what I say today...

• ...is what you already do in class;
Starting points

• The only reason for having EMI schools in Hong Kong is to give some students the chance to develop very high levels of fluency;
• Subject teachers in EMI schools have to teach their subject content;
• Subject teachers also have to help their students learn English, within the context of the subject.
• *If their English does not improve, their subject knowledge and understanding can’t improve*;
• “Using language is not sufficient by itself for successful [content language teaching] to occur” (Bunch, Abram, Lotan & Valdes (2001) p. 31).
Special challenges of being an EMI subject teacher:

- Students are learners of the language of instruction;
- Teachers are (very proficient) second language speakers;
- Students and teachers share their first language;
- The curriculum is crowded and academically challenging.

Put together, these represent a considerable challenge.
EMI teaching is good teaching and more

- Students are learners of the content AND the language so all aspects of teaching usually require more care;
- Teaching ≠ learning.
Overview of EMI teaching and learning I (General points)

• Teachers need to plan with regard to language as well as content;
• Students need scaffolding;
• Students need to talk, read and write, not just listen;
• EMI teachers need to be language aware
Planning

• Interviewer: But have you already determined before the lessons which scientific terms you want the students to understand?
• Science teacher: Yes.
• Interviewer: So this is part of your planning process?
• Science teacher: Yes.
• Interviewer: How about the means which you use to teach the words?
• Science teacher: You mean the ways I introduce the words, whether it’s through a story, whether it’s through the experiment, whether it’s just refer to the book, or [the] glossary in the book. Yes, I have thought about that.
• Interviewer: So this is already in your head.
• Science teacher: Yes.
Scaffolding

- Scaffolding (= language support) = support to enable students to carry out a task which they could otherwise not complete successfully (in English).
- But the scaffolding must be withdrawn when it is not needed to make sure students learn to stand up on their own.
Students need to talk, read and write, not just listen

Geography:
We have already discussed five problems about the scientific farming methods. I’d like you to first close your book, and then discuss the possible solutions. [...] Use your imagination, think about how you can solve these five problems that come from the scientific farming methods. You may now start to discuss. [students discuss in pairs/groups for 2 minutes] You may now come out and write.

Students use their own ideas in talking to partners. They don’t repeat the teacher’s words.
EMI teachers need to be language aware

- Develop an awareness that certain words, sentence structure and speed of delivery may be too difficult for students;
- Develop strategies for scaffolding students’ learning.
Strategies for EMI

- Content obligatory language;
- Questioning techniques and feedback;
- Signposting;
- Visuals;
- Repetition, repair and paraphrasing;
- Focusing language;
- Organizing language such as transitions and other markers.
1. Content Obligatory Vocabulary

• “Content obligatory vocabulary”: words or phrases which are the content – without these terms the content cannot be expressed.

• In other words, the key words of a lesson.
Teaching techniques

Content obligatory vocabulary

• There is no right way but there are a lot of useful techniques;

• Explicit introduction is essential – making students *notice* that the new word is important;

• Students need to know these words in English – so translation is unsuitable on its own;

• Rule no. 1: *Use several techniques*
Translation

• Is there anything wrong with simply translating new and difficult words?
Loquat
Teaching techniques
Vocabulary

• Definition
• Example
• Synonym
• Paraphrase
• Analogy
• Demonstration
• Visual support
• Derivations – relate to other words that students already know
• Ask students to guess
• Ask students to use a dictionary.
• …and yes…translation – or, better, get the students to translate
Gravity

• Define- “This is the force that attracts objects to each other.” What does the force do?
• Example- “What force keeps the moon revolving around the Earth?”
• Demonstrate- pen falling into hand
• Synonym- “a kind of force”
• Translation- “What do you call this force in Cantonese?”
Gravity
Analogy or picture:
Is this the same force?
Task

• Choose one content-obligatory word and explain it using the techniques.
• Sample words if you cannot think of any:
  – revolution (history);
  – fertilisation (biology);
  – congruence/symmetry (maths);
  – perspective (A&D);
  – deforestation (geography);
  – distillation (chemistry);
  – acceleration (physics);
  – redundancy (computer);
  – profit (accounts)
  – opponent (P.E.)

• Definition (gravity and fertilize)
• Example
• Synonym
• Paraphrase
• Analogy
• Demonstration
• Picture
• Derivations - relate to other words that students already know
2. Questioning Techniques

• Knowing how to ask questions is a skill.
• EMI students find it especially hard to answer questions in class.
• Teachers need to develop questioning skills which can encourage and scaffold answers.
Questioning techniques

- IRF/E or triadic exchange
- Display and higher order questions
IRF/E

- Initiation, Response, and Follow-up or IRE Initiation, Response, and Evaluation
Common classroom exchange

• Teacher: What do we do with a saw? Mary.
• Student Mary: Cut wood.
• Teacher: We cut wood.
  – The pattern usually follows: (1) the teacher asking something, (2) a pupil answering, and (3) the teacher acknowledging the answer and commenting on it.
IRF/E

• This three-move [IRF/E] structure is the normal form inside the classroom for two reasons:
  • Firstly, questions asked are ones the teacher already knows the answer (the intention is to discover whether the students also know answers and produce thinking)
  • Second, answers are difficult for others to hear and thus the repetition, when it occurs, may be the first chance some students have to hear what another student said.
Questions

• However, most of the questions used by teachers are for “display” and produce only short responses (one-word answers) from students.
The problem with IRF

- Student utterances [student speaking] are often [grammatically reduced], occurring only in the response slot, sandwiched between two teacher turns, they also prevent the student from doing turn-taking, and topic development. They do not allow, negotiation of the direction of instruction (van Lier, 2001, p. 96).
Two types of questions

• **Display**- students generally know answers; teachers use them to review and confirm.

• **Higher order** (often open-ended)- the answers are often not known by students and require deeper thought.
Higher order questions

1. Why are HO Qs important?
2. Why don’t students like to answer HO questions in class?
3. What can teachers do to improve the response level to HO questions?
Why are HO Qs important?

• HO Qs demand that students think about the subject and then, usually, articulate their thinking: i.e. they have to explore the subject and then use English (in an EMI class) to make connections between aspects of the topic. This contributes to understanding (it’s the other side of “explaining”)
Task: Why don’t students like to answer HO questions in class?

• They cannot formulate an answer;
• They can’t put the answer into English;
• They are shy;
• They are shy of speaking English;
• They don’t have time to formulate the answer;
• They don’t feel it is appropriate to speak a lot in class.
What can teachers do to improve the response level to HO questions?

• They cannot formulate an answer;
  – Avoid asking such questions
• They can’t put the answer into English;
  – Give language support; (Give part of the answer)
• They are shy or shy of speaking English;
  – Lower the pressure; (short group task)
• They don’t have time to formulate the answer;
  – Give wait time;
  – Give collaborative planning time;
• They don’t feel it is appropriate to speak a lot in class.
  – Give positive feedback;
  – Gradually change their view of learning.
‘Triadic dialogue’: Using short questions to reach an HO answer

1. Ask HO question and write it on the B/board
2. Ask a series of short answer questions
3. Lead students to the answer to the HO question
4. Assuming no satisfactory answer
5. Refer back to the HO question – point out that students have now answered it
6. Ask a student to repeat the whole answer
CHEMISTRY: FILTRATION

T: I can see everyone has the white marble on top except this group. And then activated carbon in the middle, three groups, four groups, five.... Four groups. Okay? Now as far as I can see, marble on top, most of you, and then second, either the fine sand or the activated carbon, okay? Actually.... Actually.... **Which one should be put on top?**

S: White marble.

T: **Why put marble on top?** There are many of you doing it like that. **Why put marble?**

S: Marble can .... remove the solid.
Remove the? The solid.
What kind of solid? The grains.
What about their size? Bigger.
Yes, okay? Marbles can remove the solid with the biggest size.

Full statement of the answer, bringing together the short answers given by students
Higher order geography question

• *How would scientific farming methods result in financial difficulties for a farmer?*
• But how would a scientific farming methods result in financial difficulties? Think about it. Annie?
• Farmers have [???
• Why? You mean farmers don’t have enough money to use the method or something else? Farmers don’t have enough money to what? It’s not about use the money to…. Not enough money to use the machines, but it’s about not enough money to________?
• Buy the machine.
• Yes, to buy the machine. Thank you. So they run into difficulties when they have to replace.... I mean they have a lot of machines, right? But these machines require some energy to mobilize. You can... you have to mobilize the machine, you need to use a lot of energy, let’s say electricity. You use a lot of oil and that requires a lot of money. And at the same time, these machines are what? When we need to buy them, they are very_______?
• Expensive.
• Expensive, yes, that’s good. And imagine when all the machines break down out of order, what happens? What should the farmer do? They have to buy a new one, or they have to repair the old one, and that needs what?
• Money.
• Money. So this is what point number 5 is about.
• ........
• So at last the farmer earn less. So try to think, try to link these to the machine. Think about what a farmer do if they earn less, do you think they can pay the expensive machine?
• No.
• They would have a problem. So the two points are related. Okay? We have these financial difficulties.
Planning

• Of course all of this takes planning before the lesson.
• For important higher order concepts, planning how to introduce them through questioning is necessary.
Task
Subject specific group work

• Think of a higher order question.
• Write a question-and-answer dialogue that could lead a student to the answer.
Another possibility in the IRF sequence is "repair"
  • Pronunciation
  • Grammar
  • Vocabulary

To what extent should teachers repair students’ language?
Repair

• Taking this a little further, error correction may be “direct or indirect, overt or covert;… in short, teachers are open to many options – their split-second decisions in the rapid flow of a lesson may have consequences for the learning opportunities they present to their learners.”

• Van Lier (2001) concludes that repair is ‘closely related to the context of what is being done.’
Signposting
Teachers need to use advance organizers and transition markers

• “Today we are going to discuss the structure of the eye and the functions of different parts of the eye.”

• “Okay, now we are going to discuss more about the concentration of a solution...”
Transition & other lesson markers

• “Now, we’ll continue with another experiment, okay? Sorry. First, we’ll draw a conclusion for the pearl and sand experiment, okay? Then we go to another experiment. “

• “Ok, so we’ve finished the art song. Now we move to another type of music. Then I want you to turn to your textbook, ok, then we are going to try a new song.”
Why are these “simple” devices important?

• Giving students a signposted pathway through the lesson makes the lesson easier to follow.
• The students don’t have to concentrate too hard to work out the focus or the purpose of each part of the lesson.
• This means that, in a fairly high stress environment (i.e. new content and second language) they have more cognitive resources available for new learning.
Signpost summary

• Review:
  – “Yesterday we learned how to…”

• Advance organiser:
  – “Today we’re going to explain… Then we’ll explain…”

• Results:
  • “As you can see from the table, the greatest effect was produced when…”

• Transitions:
  • “Okay we have now finished the first step. Let’s move to the second step.”

• Focusing language
  – “Now let’s take a look at that word/idea more closely.”

• Conclusion:
  – “So, now let’s review what we learned today.”
COMMERCE: FRANCHISE

But the franchise store, or the franchise system may have some disadvantages. What are they? For example, the prices are fixed by the franchise system, or by the franchiser. Alright, the price is fixed. So the flexibility is lower. The franchisee cannot change the price, cannot alter the price. So flexibility of the operation is lower. Do you understand, the flexibility of the operation is lower.
• MATH: CONGRUENT TRIANGLES
• T: Why don’t we say “SSA”
• S: …..
• T: Actually this one is right. “SAS”. Why?
• S: The angle is between the two sides
• T: Yes, the angle is found between the two sides. Or maybe we can say the angle is included by the two sides. Can you see the word “included” here? This angle is included by the two sides. This is an included angle. O.K. I repeat. This angle is included by the two sides. This is an included angle. So in this case, if there are 2 pairs of corresponding sides and one pair of corresponding angles, I mean the included angle. One pair of included angles are equal, then we can say that these two triangles are congruent.
Visuals

- Visuals
- Tables
- Blanks
- Diagrams
- Graphic organizers
Communication…

• …comes in many forms
• Classroom teaching generally comes in written and spoken form from teacher to student.
Written language

- Written language: enters through the **eyes**
- is processed **faster** by the brain
- is **dense**
  (no repetitions, hesitations, etc)
Spoken language:

- enters through the ears and eyes
- is processed more slowly by the brain
- is slower (many repetitions, hesitations, etc)
Sense of vision

• Explanations without visuals do not take full advantage of the human senses.
Geography class- structure of the Earth

• Explain about the Earth’s core, mantle and crust.
• Teacher: (audio or textual); no visuals
Adding written text

• “The crust is on the surface.”
• “The core is the deepest in the middle.”
• “The mantle is between the crust and the core.”
Basic diagram

- Task: Label the diagram
  - Mantle
  - Crust
  - Inner core
  - Outer Core
Color diagram

Plus exercise

• The brown color is _______.
• The outer core is _______ colored.
2. Use the information from your textbook to fill in the following table.

<table>
<thead>
<tr>
<th>Layers</th>
<th>Where is it?</th>
<th>What is it made up of?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Crust on the ______________ of the earth</td>
<td>_______________ rock</td>
<td></td>
</tr>
<tr>
<td>2. Mantle between the _________ and the ______________</td>
<td>hot molten rock called_________</td>
<td></td>
</tr>
<tr>
<td>3. Core (inner and outer core) in the ______________ of the earth</td>
<td>______________ of iron and nickel</td>
<td></td>
</tr>
</tbody>
</table>
3. Describe the structure of the earth in a short paragraph.

The earth is made up of _____ different layers: the ___________, the ____________, and the __________________. The crust lies ________________ and it is made up of __________________. The mantle ___________________________________________ ________________________________________________________.
Google images

- Labeled images enhance understanding
- Keywords:
  - River, water, electricity, diagram
Resources

• [http://www.khanacademy.org/math/geometry/congruent-triangles/e/congruency_postulates](http://www.khanacademy.org/math/geometry/congruent-triangles/e/congruency_postulates)
Language support

- Graphic organisers – to help students organise their thinking as they discuss. If you know the outcome you expect then a graphic organiser helps students to see structures in the knowledge. It’s then easier to report or write.
I.S. ENERGY

Electrical energy. So for the, for the picture, the sunlight, the solar energy can boil the water, the water changes into steam, alright? The steam can make the turbine move, alright? So when it moves, it makes the dynamo move and the dynamo can produce electrical energy, right?

And normally the dynamo works like this but how can we make use of the solar power to make this water boil. The sun is here and the sun will shine on this tank of water and then this water absorbs the energy. When this water is heated up it will become steam. The energy has come from the sun. [ .... ] Let all of the water absorb the energy from the sun, OK? When energy is here it will boil and when the water boils it will become steam and let the turbine turn and this is the way power, er, solar power can work.

The language and the graphic are not linked up – there is no direct reference to what the graphic shows.
Focusing language

I.S.: Neutralisation

Why are your teeth dirty? We can brush our teeth after every meal. Some people have this habit. After lunch, they brush their teeth. After dinner, they brush their teeth. What happens when we have eaten something? When we have eaten something, what happens to our teeth? The food in our mouth will produce some kinds of acid. And acid will make our teeth decay
Focusing students’ attention on critical features

Mathematics: Corresponding angles

In this diagram, four angles are formed here. Four angles are formed here. Now we are going to look at the relationship between the angles. Okay, what do you think? What do you think? Will there be any angles that will be the same? Okay. Will there be any angles that are the same, that are equal?

Explicit signal tells students that the next part is important

Self-answering Qs and repetition are common ways of focusing attention
Overview of EMI teaching and learning

- Teachers need to plan;
- Students need scaffolding;
- Learning needs to be monitored;
- Students need to talk, read and write, not just listen;
- EMI teachers need to be language aware;
- Content obligatory language needs attention
- Teachers need to ask questions and feedback;
- Teachers need to use visuals;
- Teachers need to use repetition & paraphrase;
- Teachers need to focus students’ attention;
- Teachers need to use transitions and other markers.
References
