



# Learner Empowerment:

Maximising Student Talk and Engagement through Learning the Language of Mathematics

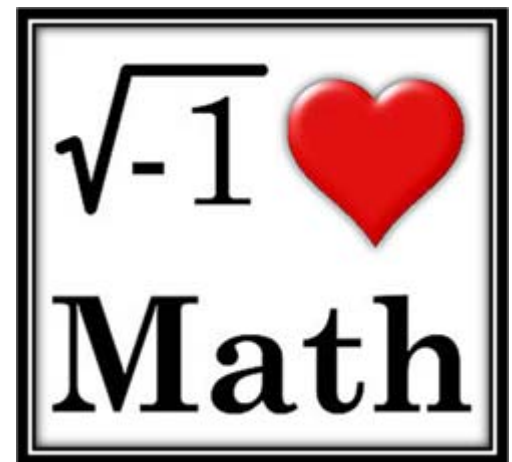


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# Highlights

- Course for Secondary School Teachers on Teaching Mathematics Education  
Key Learning Area in the English Medium
- INSTEP, Faculty of Education
  - Four key language functions
    - Instructions
    - Explanations
    - Questioning
    - Feedback



# When questioning, attend to ...

- **Purpose** of the question
- **Phrasing** of the question (clear, precise, and economical)
- **Focus** of the question (e.g. may aim at eliciting a number of responses or restrict attention to a single aspect)
- **Variety of the question**
- **Re-direction** (the degree of student participation can be increased by the re-direction of a question to a series of students, i.e. maximizing the interaction)
- **Distribution** of questions (evenly through class; pose questions to the whole class, though sometimes direct to a specific pupil; avoid asking a few bright kids only)
- **Pause** after you have posed a question. Give **TIME to THINK!** Use eye-contact to maintain a link while waiting.

(Wong, 2012)

# Receiving Answers

- Showing your interest to LISTEN and RESPOND to the students' contributions
- Conveying your concern with the exploring and searching process for “answers” (instead of identifying who cannot give the correct answer).
- Creating, gradually, an atmosphere of TRUST

**DON'T be too concerned with giving your “model answer” or “perfect answer”.**

**DO LISTEN carefully to students and TRY TO TAKE UP THEIR GOOD IDEAS.**

(Wong, 2012)

# Some practical HINTS:

- Include QUESTIONING in your *lesson planning*. In particular, some **KEY QUESTIONS** should guide the development of thinking/reasoning.
- Try your best to make your question **clear**. (N.B. “clear” doesn’t mean “closed” nor “heavily guided.”)
- Sometimes, you may need to **rephrase** your question or to **re-structure** your questions.
- Sometimes, you may need to **ask individual students** rather than to receive chorus answers.
- Allow **sufficient time** for the students to think.
- Be a **CAREFUL LISTENER** to different kinds of answers.
- Try to further develop (may continue by questioning) your lesson **based on students’ replies (right or wrong)** to your questions.



Good luck!

Good health!