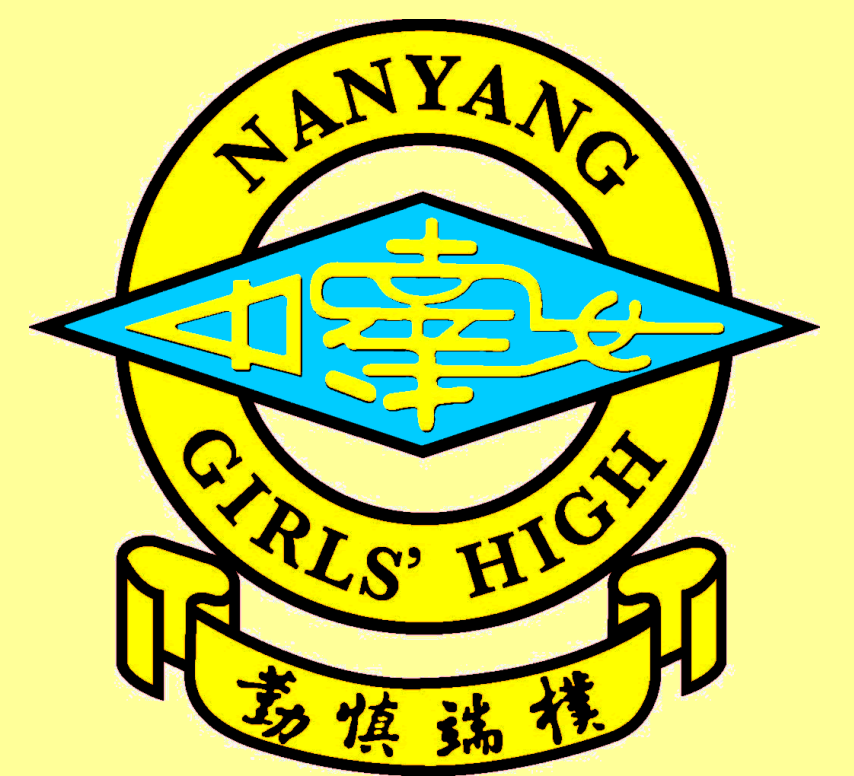


Alice in Wonderland: Designing and Implementing a Concept Base Interdisciplinary Curriculum*

Redesigning Pedagogy International Conference – 1st June 2017 – Nanyang Auditorium, NTU



1 The New Nanyang Curriculum



- Sec. 1 students at Nanyang Girls' High School embarked on a new interdisciplinary curriculum in 2016. The curriculum is a multi-faceted approach to learning, composed of themes that overlap and reinforce core skills. At the heart of the curriculum are seven thought-provoking weeks of *Interdisciplinary Studies* (IDS).

2 Rational for a New Curriculum

"Students should have an innate curiosity of wanting to know what is happening around them."

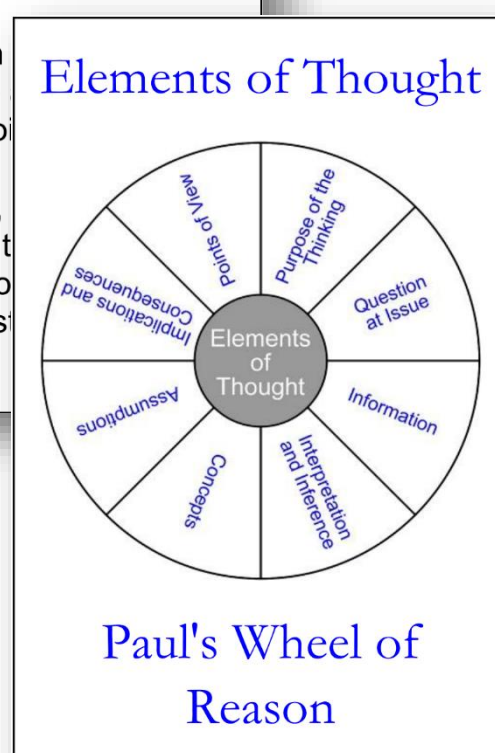
Mr. Ng Chee Meng, Minister for Schools, 30th Dec. 2015.

- The objective of the new curriculum is to move beyond regular classroom teaching in order to equip students with skills that are necessary for life in an ever changing world. Learning is based around concepts that are relevant to the students. Factual information is limited – students are required to collaborate and make connections, thinking critically and creatively in order to solve authentic problems.

3 Designing the New Curriculum

3. Listening to Others with Empathy and Understanding

- Stop talking and listen! Don't interrupt! Be patient!
- Pay attention body language
- Paraphrase, examples of discussed to understand



- *"Children must be taught how to think, not what to think."*
Margret Mead
- A core team of approximately 12 teachers, representing different subjects, were tasked with designing the curriculum. The core team met for two hours every week.
- The new curriculum was designed around *macroconcepts* such as *evidence* and *change*. These were used to forge connections between different disciplines.

4 Implementing the Lessons



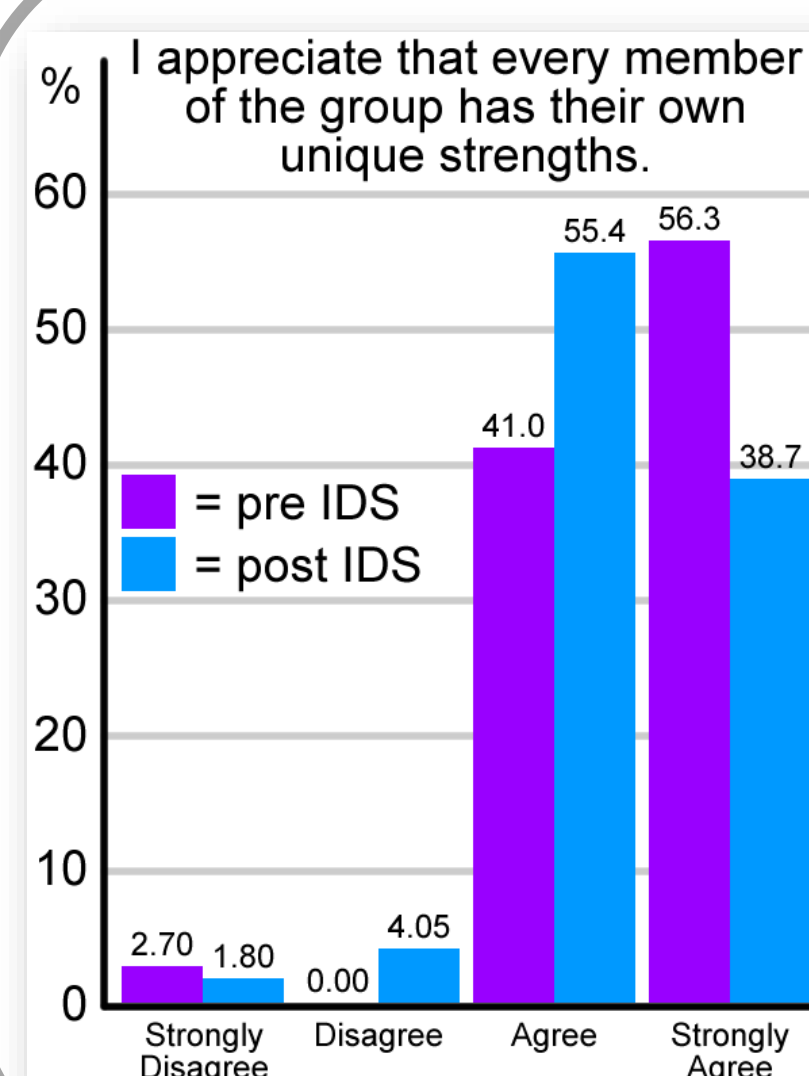
- Each subject begins with students unpacking the nature of the discipline (disciplinary literacy), e.g. *The Nature of Science* and the principles of History.
- Certain macroconcepts are used throughout the subjects in order to organise the students' thinking and understanding, as well as make connections between different disciplines, e.g. how is *evidence* used in Science similar to / different from how *evidence* is used in History?
- Reflections using Habits of Mind.

5 The Interdisciplinary Studies



- Using the macroconcept of *sustainability*, students spend seven weeks focussed on two Interdisciplinary Studies; *Garden to Table* (systems) and *The Built Environment* (models).
- Using the principles of *Design Thinking*, students work in groups to propose what a sustainable Nanyang Girls' High School would look like in 2036. The groups present their products at an exposition, attended by teachers and industry professionals.
- Assessed by rubrics: Process 50%, Presentation 20%, Product 30%.

6 Reflections and Conclusions



- At the end of the seven week Interdisciplinary Studies (IDS), teachers sought both quantitative and qualitative feedback from the students. The most interesting feedback was related to the students' group dynamics, e.g. whether work was fairly distributed.
- *"The Interdisciplinary Studies stretches our thinking across other subjects."*
- *"We have to be more confident and get out of our comfort zone."*

• Scan the QR code to view this poster as an online presentation at www.scientist.sg/design_curriculum.pdf



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