Confronting Science Anxiety through In Dialogue with Nature

1. Project Objective

1. To identify the possible factors contributing to the change in students’ science anxiety after taking ‘In Dialogue with Nature’, a general education foundation course.
2. To reduce students’ science anxiety and increase their efficiency in learning.

This project is supported by the Bamboo Grant Program 2016/17 of the United Board.

Fig. 2 - Percentage of SA students by Faculty

Fig. 1 - Percentage of SA students & Average no. of SA questions being answered ‘much’ or ‘very much’ frightened by gender

2. Methods

Science Anxiety Questionnaire

Science Question

SAQ

Students were asked to fill in the SAQ before and after taking “In Dialogue with Nature”

TIP: Double click to edit

3. Analysis

Terminology

N = GA + NGA

GA = generally anxious

NGA = not generally anxious

SA = science anxious

NSA = non-science anxious

%SA = SA/N x 100%

Average SA = Average no. of SA questions being answered “much” or “very much” among all students

2014-15, Term 2 & 2015-16 Term 1

2015-16 Term 2 & 2016-17 Term 1

Is there any change in the way you feel about science after taking the course?

Which component of learning (or assessment) generates the greatest anxiety?

Source of Science Anxiety

- Fear for getting it wrong!
- Affecting the GPA
- Losing face in group discussion

What could reduce your science anxiety in taking this course? What could we do to increase your confidence?

Focus Group Interviews

7 students from 5 faculties & taught by 3 UGFM teachers were interviewed

I’m afraid of misinterpreting the ideas of the texts and making mistakes in writing answers and doing quizzes.

The course has given me a positive feeling about science. I used to think that science is ‘professional’ stuff. I just remember the equations and stuff. Facts into my head; way... we were exposed to different scientific issues. It allowed us to develop our interests and not to feel anxious.

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Some authors from the texts have spent their whole lives in research, published papers until the day they died. I studied science in high school, but I don’t think I have such patience and perseverance... really admire this spirit and it is remarkable as a human being.

Feeling positive or less anxious towards science

Recognizing the nature of limitation of science

Appreciating scientific spirit

Teachers being smily and encouraging when students answer questions in front of class.

Correlation of scientific knowledge to daily life

Teacher’s guidance on how to write a term paper

Mobile App ‘DiaNable’

Plagiarism check: checking on your arm – Newton’s laws