Introduction
Our motivation for this project stemmed from communal concerns that boys are focusing on the grade of the final product rather than the construction stages and the learning process.

Our research explored how an open-ended project with opportunity for multiple peer- and self-evaluations would deepen the learning outcomes for our students. We hoped that by emphasizing the process and taking time to construct multiple iterations of a single idea, the boys would learn to value the learning process and not simply the grade attached to the final product.

Research Question
How might a deliberate focus on reflection during a Maker project deepen the learning of Grade 9 boys?

Research Context
With a student body of 700 boys from Grades 3-12 and a faculty of 95 members, Crescent School strives to develop men of character from boys of promise. Using the four pillars of Respect, Responsibility, Honesty and Compassion, Crescent works to foster relationships within its community and create a learning atmosphere that extends beyond the walls of the classroom.

The Research Action
Our action involved implementing Maker Projects with an Iterative Design Cycle in all three areas of the Exploring Technology course. All three instructors moved from a project model that had a single final entry and a teacher-based assessment, to an iterative project cycle with multiple stages of peer- and self-assessment prior to a teacher-based assessment.

Data Collection
The multiple-choice and multiple-select questions provided quantitative data, and boys' comments on "Why" or "Why Not" provided qualitative data.

Reflection Videos
Boys were tasked with shooting their own reflection videos with a number of prompts that allowed them to talk honestly about the peer- and self-evaluation process.

Interviews
Boys were asked questions in a controlled environment and tasked with reflecting on their participation in peer- and self-evaluations and asked to describe their thoughts on the process.

Data Analysis
All free response comments from the boys were collected, examined and categorized simply as “Pro” or “Con” (in favour of the process in question, or not in favour of the process in question). This process was applied to the responses to the free answer questions (“Why” or “Why Not”) from the survey, transcribed video responses, transcribed interview responses and comments that the boys made in class time.

Conclusions
We feel confident in stating that the boys, almost without exception, put a high value on the peer-evaluation process and put a low value on self-evaluations. We leveraged this value set to help bring deeper learning via the peer-evaluation process. We were able to change our practice and the peer-evaluation process to move our boys from a superficial use of peer-evaluation, purely for marks, to one that asked them to look more deeply at their own work as they examined the work of their peers.

This is not at all how we thought the deeper learning would occur, but we are more than satisfied with the results. The boys have gained an appreciation for the process of going back to their work and reviewing and revising it with the benefit of a different perspective. They now place a real value on looking at the work of others and then thinking differently about their own; to us this provides deeper learning than they would have otherwise experienced without adding the element of peer evaluation to the course work.

Key Readings


Further Information
This poster and further information is available at http://www.theibsc.org/

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