Using Student Generated Blogs to Guide and Assess Maker Learning Experiences

Christopher Fox
The Haverford School
The Haverford School is a selective private, non-sectarian, all-boys college preparatory day school, junior kindergarten through grade twelve. Founded in 1884, it is located in Haverford, Pennsylvania, nine miles northwest of Philadelphia.

Students: 1,013 total, 436 Upper School, 225 Middle School
352 Junior Kindergarten, Kindergarten, and Lower School
“Mr. Fox”
"Temporary Constructs", 46" x 94", Oil on Canvas
2014-2015 IBSC ACTION RESEARCH IN BOYS’ SCHOOLS

Boys as Makers

CALL FOR APPLICATIONS

We are pleased to announce that the research topic for the IBSC Action Research Program in 2014-2015 is Boys as Makers.

In recent years the “Maker Movement” has garnered huge interest and excitement. In the educational context, Maker Learning is a technology-based extension of hands-on, project-based learning that allows traditional "making" to be extended and reshaped and new forms to be pursued.
Susan Isaacs, 1924 – 1927, head of Malting House School in Cambridge

For Isaacs, play involves a perpetual form of experiment..."at any moment, a new line of inquiry or argument might flash out, a new step in understanding be taken".

Mary Jacobus, The Poetics of Psychoanalysis (Oxford 2005), pg. 97
“Homo faber suae quisque fortunae”
(Every man is the artifex of his destiny)

Appius Claudius Caecus ("the blind"; c. 340 BC – 273 BC)
How to tie a Bow Tie - Fully Explained

Offshoreorganbuilder

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So what about my Action Research?

“The one who does the work does the learning.”

Terry Doyle
Action Research Project

- Guide or Frame the “Maker Practice” without directing it?
- Create opportunity for deeper and transferrable learning?
- Assess effectiveness of the practice for growth?
“Imagination is the ability to conjure up in the mind that which does not yet exist to the senses.”

Ken Robinson
The Creative Process

Question
Problem
Challenge

Limits?
Assumptions?

Experiment
Explore

Refine
Prototype
Select
Develop

Make
Build
Construct
Improve
Fabricate

Generate
Bring into being
Produce

Organize
Compose
Shape
Design

© 2013 C. Fox, adapted from The Process of Design Squiggle by Damien Newman, Central Office of Design
Creative or Maker Process

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Critique

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2 ½ Dimensions?

So..., as experienced painters and draftsmen we have become adept at dealing with the extreme limitation of working on a two-dimensional surface and creating the illusion of three-dimensional space and form through our manipulation of perspective, light and shade and color theory. We've also been able to suggest motion though our ability to manipulate the motion of the viewer's eye. So... our guiding question is: *What might happen, were we allowed to take a slight step towards actual three-dimensions and actual movement?* Some artists have already done some explorations into “two and half dimensions” and into “kinetic art” so you should do some research to inform your imagination.

Given our access to the shop space and tools next door, everything from jig saws and laser cutters as well as thin wood and cardboard, what might those tools and materials allow us to do that we couldn’t do with just oil paint and canvas?

Given access to some simple programmable “robotics” parts such as motors, servos, led lights and motion sensors, how might those allow us to build real motion into our work and/or actual interactivity with our viewers?

Projects start with a question.
Search terms for research:

- Joseph Cornell
- Louise Nevelson
- Jean Tinguely
- Kurt Schwitters
- Robert Rauchenberg
- David Hockney – Video Installation
- Low Relief
- Shadow Box
- Bas Relief
- Assemblage
- Kinetic Art
So what about my Action Research?

“The one who does the work does the learning.”

Terry Doyle
Ben researching on a classroom iPad.
Reed researching on his laptop.
Micha and Shane experimenting with cardboard shapes.
Greg talks about experimenting for his 2 ½ Dimensions Project
Creative or Maker Process

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Limits?
Assumptions?

Make Mistakes
Brainstorm

Reflect

Analyze
Critique
Cameron works with a prototype.
Gabe explains prototyping his idea for the 2 ½ Dimensions Project
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Metacognition and deeper learning?
2 1/2 Dimensions?

My idea is that I would like to create a scene using multiple monitors or television sets that would tell a story. The idea of a half dimensions is the time aspect as the image will change over time. The idea is to either take reality, and create a scene based on this story, or to use digitization to create a story. This is the beginning research. I looked at David Hockney’s video installation. He led me to Nam June Paik.

My idea had changed to work with gears instead. My hope is to have the rotating gears be able to create new images by spinning using a hand crank.
Challenge Stage:

• What is the guiding question and what do you think it means?
• Were there terms in the question or project description you needed to look up? If so, explain those terms.
• What are the actual limits of the project?
• What then is open to your interpretation?
• Were any artists or art movements suggested for further investigation and what did you find out when you looked into them?
Freddy uses a classroom iPad to blog about his brainstorming stage
Brainstorm/Experiment Stage:

- Describe some of your first ideas through writing and photos (even though first ideas can sometimes be lame)
- Sometimes brainstorming involves making quick lists of words, maybe you could post one of those lists.
- Photograph any rough sketches or doodles you did while brainstorming.
- Did you, through your brainstorming, discover some new possibility that you think is a particularly unique way of answering the challenge, even if it’s impractical to carry out? If so describe it.
Jon photographs his work in progress for use in a blog post.
A post showing the result of Ben’s research stage of the 2-1/2 Dimensions Project
“Walter, what do you think about our practice of using the blogs?”
Reed talks about the benefits of blogging about his work.
Assessment?
As a learning practice?
Creative or Maker Process

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Reed, on the subject of assessing the parts rather than the whole.
“The principle goal of education is to create men who are capable of doing new things, not simply of repeating what other generations have done – men who are creative, inventive and discoverers.

So we need pupils who are active; who learn early to find out by themselves, partly by their own spontaneous activity and partly through material we set up for them, and who learn early to tell what is verifiable and what is simply the first idea to come to them.”

Jean Piaget (1896 – 1980)
“Sam, what do you think about the grading of the stages rather than the final product?”
“The greatest sign of success for a teacher... is to be able to say, "The children are now working as if I did not exist."”

Maria Montessori (1870 – 1952)
Cameron explains his “maker learning experience”, so far.
Chris Fox

cfox@haverford.org

chrisfox.org

christopherfox.edublogs.org