REDESIGN

LIBRARY

IN THE BEGINNING

ACTION RESEARCH GRANT

SMALL CHANGES

White Pine

Popular Fiction

Library

Psychology

Tigers

Teen Fiction

Think

Share

Horror

Write

Spanish

PROJECT

Insightful

Project

Fiction

Design

Mystery

Sociology

Literature

Books

Modern Languages

Science

French

Device

Non Fiction

Learning Commons

Learn

Globe and Mail

PDSB

History

Travel

Databases

EYOD

Manga

Dystopia

Collaborate

Graphic Organizers

Research

Performance Arts

Read

Canadian History

Streetsville

Action Research Project Completed by Alicia Quennell and Brad McGitchie

Project Findings and Summary

Purpose
The purpose of this action research project was to evaluate and understand how the implementation of additional 21st century learning tools could positively impact student engagement. We created a new unit for two sections of TIJ 1O0 based on research surrounding problem based learning, a desire to redesign the library to align with learning commons philosophies, and collaboration between the classroom teacher and the teacher-librarian. The unit was implemented in the school library learning commons.

Theory of Action Statement
IF we apply a design process using 21st century tools **TO** plan a construction project **THEN** students will be engaged through authentic problem based learning practices.

Methodology
This project created the opportunity for teachers to work collaboratively and create a student driven, problem based learning redesign project.

Students need to: be open to actively participating in collaborative planning, conducting academic research, creating rich inquiry questions, and producing final redesign footprints representative of work completed.

Teachers need to: be prepared to work collaboratively and devote a significant amount of time preparing this task and creating all the parts of it ahead of delivery.

Part 1
Collecting Preliminary Data (student, teacher, site stats)
The preliminary research and data collection for use in this project began early in September 2013. As the full time teacher-librarian at Streetsville Secondary School, I am responsible for conducting the grade nine library orientation for all new students. During this time, (all) students were encouraged to complete a survey (surveymonkey.com) commenting on their use of our library, their needs as student users, and their ideas of changes they would like to see in the space. In addition, school staff was encouraged to complete a similar survey focusing on their perspectives and needs. The data collected from these surveys was compiled into a "data package" later used to help inform student collaborators as they worked towards designing a space that would meet the needs of our own users.

To broaden the base of information available to students, I also visited twelve libraries (Peel Secondary and Mississauga Public) to gather data and images to be used later in the project. All of the data and images collected over semester one were compiled into electronic folders on the "Library Office" 365 page.

Part 2
Creating & Implementing the Unit
A significant amount of time was spent in the creation of this new unit. Many hours were spent reading professional resources surrounding the practice and creation of authentic problem based learning experiences, the emerging philosophies of the library learning commons, and the success found connected to the use of 21st century learning tools. We spent time release dates collaborating with our instructional technology resource teachers, and creating solid lessons and expectations throughout the unit. To begin the process, a new **lesson plan template** was created (see below) to ensure a transparency in the delivery of specific curriculum expectations, learning skills, and assessment practices that reflect the "Growing Success" document. In addition, a column was created to highlight professional resources that reflect and support each lesson. These templates were a very helpful tool as we moved forward with the planning. Students were prepared ahead by the classroom teacher who explained the importance of the unit and their role in creating designs for possible future renovations. The unit began with the introduction of images, included focus on digital citizenship, the use of new technology, and supporting students in collaborative group roles.

LESSON PLAN (Template)

Title of Lesson: **Date:**

Course / Period: **Duration:**

Curriculum Expectations	Learning Skills	Resources
	❑ Responsibility ❑ Organization ❑ Independent Work ❑ Collaboration ❑ Initiative ❑ Self Regulation	

This space used in each lesson plan for quotes from completed professional research.

Minds On Hook

Action

Consolidation & Connections

Assessment FOR Learning OBSERVATIONS	Assessment AS Learning CONVERSATIONS	Assessment OF Learning PRODUCTS
❑ Student Questionnaire ❑ Observation ❑ Homework Check ❑ Computer Research ❑ Utilizing Electronic Technology ❑ Note Taking ❑ Graphic Organizer / Handout ❑ Problem Solving ❑ Checklist ❑ Record of Practice	❑ Self Reflection ❑ Peer Feedback ❑ Student Small Group Discussions ❑ Group Discussion ❑ Oral Questioning ❑ Oral Presentation ❑ Learning Journals ❑ Teacher Conference	❑ Project Binder ❑ Portfolio Entry

Teacher Co-Reflection

Part 3
Analysis of Results

Despite our initial concern surrounding data creation and collection, this project resulted in significant product and proof. The unit began with a survey asking students a variety of questions surrounding their experience with summative completion to date. On March 3rd, 2014 students responded to questions and a base line for comparison was created. On April 17th, 2014 students completed the survey for a second time to produce the following data.

Survey Results

- **29%** of students surveyed had some understanding of problem based learning before the project, while **84%** knew what problem based learning was by the end of the project.

- **46%** of students surveyed identified that they learned best through creation or building, but by the end of the project **53%** of students felt they learned best through creation or building.

- Before the project only **47%** of students surveyed had helped to redesign a space; now **100%** of students share that experience.

- Students who were familiar with design software or apps increased from **41%** to **72%** over the project.

- **All students** surveyed identified after the survey that they knew about the "Seven Norms of Collaboration".

- **All students** surveyed identified after the survey that they set a personal goal in a course.

- Before the project, **33%** of students surveyed identified feeling excited about summative projects; afterwards this number increased to **48%**.

- Before the project, **62%** of students surveyed identified feeling nervous about summative projects; afterwards this number decreased to **41%**.

Student Reflection & Feedback

After completing the final presentations, students were asked to reflect on their experience using this prompt: ***Consider the time and effort you have put into the "Final Design Task" as an individual. Reflect on the aspects you found challenging and describe how you overcame those difficulties. Discuss some of the parts of the task that you found enjoyable. How might you alter these tasks for future groups of students? How would you grade your effort, participation, and final product?***

"The parts I found enjoyable were creating the virtual library because it was really cool being able to walk around the virtual library I created."

"Enjoyable moments of this project were checking out random apps and websites to use for creating the floor plan. It was fun looking at which apps were easy to use or not."

"We overcame the communication challenge and this made our group stronger."

"Doing the design on the iPad was a great way to express our creativity."

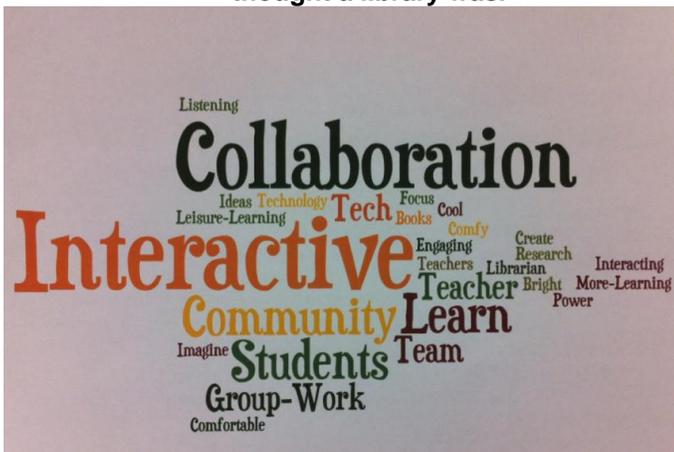"I think this project was really well planned out by the teachers."

"I found this redesign plan really fun, especially with the app we used."

"This project has truly been a journey" ... "understanding the concepts of building a new library was really fun."

Student Products
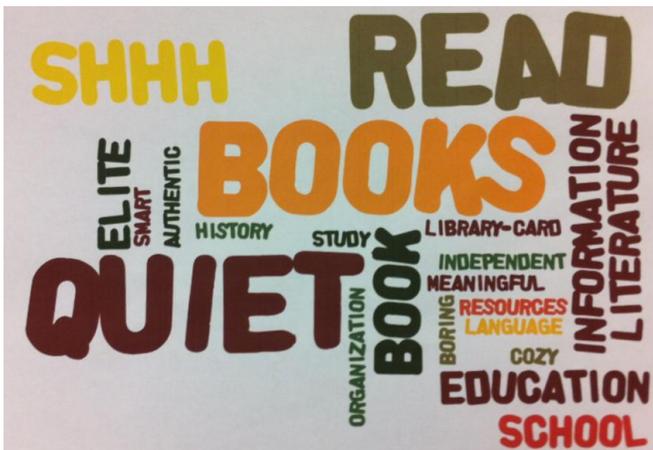
Before the lesson, students responded to what they thought a library was.

After the lesson, students responded to what they now knew a learning commons should be.

Lesson #6 was easily identified through our teacher co-reflection as the most interactive, engaging example of authentic 21st century learning. Students used the iPads to read QR Codes linked to current information about learning commons, problem based learning, and inquiry question creation.

The large graphic organizers created were amazing and the students combined previous knowledge (Peel images, internet images, school specific statistics, ideas of budget, and knowledge of vendors) with new knowledge to identify significant learning.

Padlet was an excellent tool when combined with Wordle to create this visual representation of the student learning in just one period.

In addition, students provided written feedback which created these statistics:

- **83% of students** identified technology use was a highlight for them in this lesson.

- **87% of students** specifically identified Padlet as the best part of the lesson.
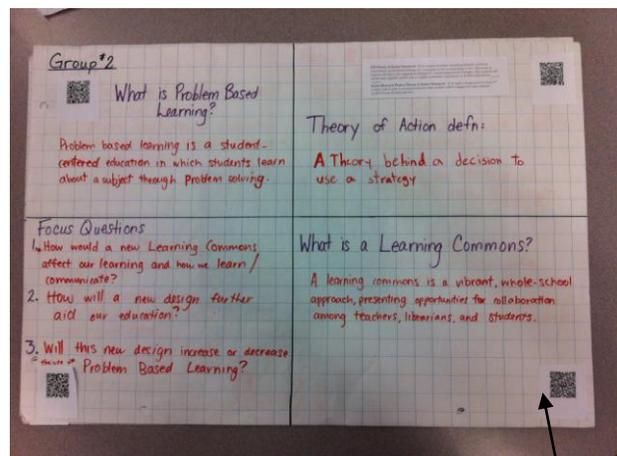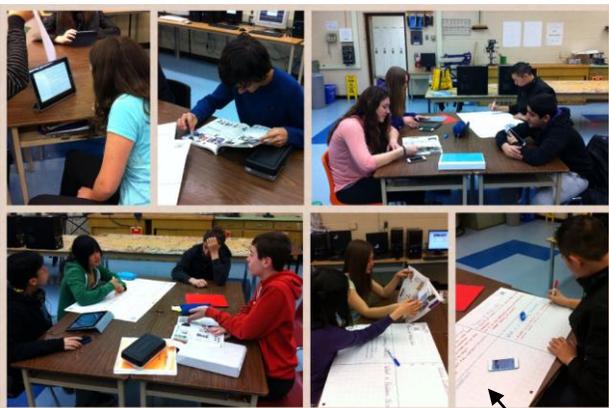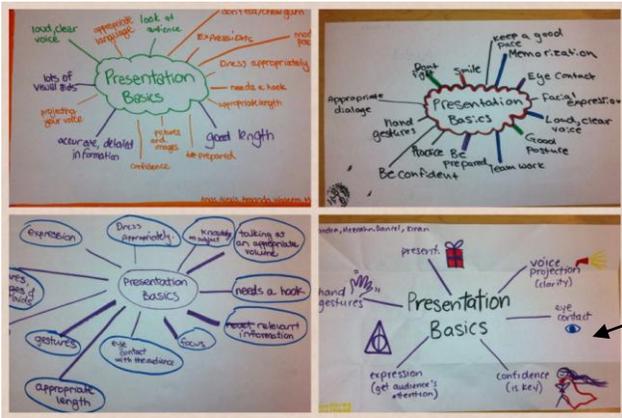
Graphic organizer combining 21st century tools (QR codes, iPad use) with traditional tools.

As seen in the provided images, students worked collaboratively throughout the unit to build an understanding and then demonstrate their understanding. On several occasions students used regular tools (graph paper, markers, graphic organizers) in combination with 21st century learning tools and skills to complete required tasks.

Summary of Findings

1. Creating Problem Based tasks was a HUGE, but worthwhile investment for teachers;

2. Students (based on observation, written feedback, and created statistics) thoroughly enjoyed activities that included 21st century tools such as the iPads and Padlet;

3. When provided with a real life problem scenario, students were highly engaged in creating solutions and took the presentation of their findings VERY seriously;

4. Although group created final products were the outcome of this task, we would change that in the future to allow EACH STUDENT to invest in creating a unique design, thus more technology is required.

Conclusion

The research conducted in this project improved teaching by building significant cross-curricular opportunities, and by modeling the innovative, collaborative processes available through our school library learning commons.

Brad and I worked collaboratively over the last two semesters planning, preparing, and delivering this project and clearly demonstrated that when students were involved in problem-based learning (the process both by giving feedback through surveys about the physical space and their requests, and by participating collaboratively to solve the problem through the design of that space), that they were motivated to see positive change come to fruition.

Student learning improved through the participation in lessons surrounding the "Seven Norms of Collaboration", and supported our school and board goals in 21st century learning via BYOD initiatives.

Product

Please find the "Final Student Products" compiled into a Prezi here:
http://prezi.com/lme-ed1_2-vq/?utm_campaign=share&utm_medium=copy

Please find our project Prezi here:
http://prezi.com/p2qcxcd8jv-s/?utm_campaign=share&utm_medium=copy&rc=ex0share

Please find a record of our tweets here: https://twitter.com/AliciaQuennell

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For additional information including: unit plan, unit project template, daily consolidation & connections questions (powerpoint), lesson plans, data package, graphic organizers, student handouts, survey results, assessment tools, rubrics, daily teacher co-reflections, and any additional student work exemplars, please contact me at alicia.quennell@peelsb.com