
KNOWLEDGE BUILDING IN ACTION

JUNIOR (4-6)



Bob Cat's Den: Exploring Innovation, Entrepreneurialism and Idea Development in the Junior Years

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Bringing IDEAS to life!

2.1 BOB CAT'S DEN: EXPLORING INNOVATION, ENTREPRENEURIALISM AND IDEA DEVELOPMENT IN THE JUNIOR YEARS

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INTRODUCTION

This case study tells the story of four Junior teachers and their students at W.H. Ballard School in downtown Hamilton: Michael Schilthuis, Gr. 5/6, Matthew Scheben, Gr. 6/7, Stephanie Haber, Gr. 6, and Marissa Murphy, Gr. 6. These four classrooms collaborated on the Bobcats' Den project, which was originally proposed by a couple of students as a way to engage the Media Studies component of the Language curriculum. The Bobcats' Den is a take on the popular TV show Dragons' Den, where participants pitch inventions and ideas to prospective business investors. The four teachers did the initial planning together and then introduced the idea to their classes, with the understanding that there was an underlying design component to the project, and that they would have to go back and redesign their plans as the project unfolded.

START WITH THE KB PRINCIPLES THAT MEAN THE MOST TO YOU:

The teachers identified the following three principles as key drivers for their work:

Improvable Ideas

Real Ideas, Authentic Problems

Epistemic Agency

KB PROVOCATION

The initial big, framing question that was posed to students was:

Where does innovation come from?

- The video "Top Twelve Things Invented by Kids" showcases entrepreneurial young people who became millionaires with their ideas. This video was used as a provocation to try to get students thinking about where ideas come from, and to help spur explicit discussion about improvable ideas. The video was also used to help students start understanding the concept of seeing a need and filling a need, as the young people featured in the video found their success by identifying a problem and attempting to solve it. The teachers found that the video was effective, and was very motivating for the students to be able to see such young people be so successful.
- This activity was done just before the March Break. Students were asked to go home and spend some time during the break identifying some problems out in the world and in their daily lives that they could try to create solutions for when they got back to school and started their design work.

STRATEGIES FOR SUSTAINING IDEA IMPROVEMENT

Move 1: See a need, fill a need!

When the students returned from March Break, the classes created Problem Walls, posting the various issues students identified around the classrooms.

Recognizing a community issue that needed solving was the first step in terms of the marketing aspect of the work. The second step would be to start designing solutions. The third step would be creating a marketing campaign to get their idea out and create a successful product.

The students were asked to take a number of questions into consideration: How common did they believe their different problems to be? Who would be able to help make the solutions a reality? Who would be the target audience? Which demographics of the population had a stake in the problem and solution?

During this process, many ties to the Social Studies curriculum were made naturally. For instance, students conducted surveys, considered environmental impacts related to making products “green,” and so on.

Move 2: Practising a media campaign!

Students practised creating a media campaign by taking an existing cereal box and designing a better one. Students had to create a prototype and a media campaign. This activity was designed to engage the students more deeply in their media studies and in exploring marketing.

Students were paired across classes.

Groups had to present their ideas in the Dragons’ Den style to a panel of their peers. When judging time came around, there would be 13 presenters (7 groups) in each of the two classrooms. In this way, every student was both a presenter and a judge at some point.

Move 3: Designing Solutions!

Having had the practice run with the cereal boxes, now came the time for students to work on the problems that they had identified during the March Break.

Students self-selected groups of 2 or 3 to work in. Some students worked individually. In total, there were over 70 students participating in the design competition.

Students’ proposed initial design ideas.

What surprised you?

The range of ideas, the level of enthusiasm, and some kids that you didn’t think would be engaged really got into it. Some students who are used to always being right had a bit of a struggle because they had to learn to take critiques and critique themselves too. But all students were fully integrated because they all had a choice about what to work on, and there was a lot of help available from other kids, from the homeroom teacher, and from their own teachers.

Students were also encouraged to think about the “cons” of their solutions in a positive way, e.g., How would we market it acknowledging these things and account for them?

The design process was organized so that students would be able to complete multiple iterations of their designs, be able to give and receive feedback, and share their ideas with one another throughout the process.

Focus groups were formed based on alternating configurations of different student groups across all participating classes. One student group would do a practice presentation of their design idea, and the others would serve as a test audience and offer friendly criticism.

What was one of your greatest challenges?

Our greatest challenge was organizing the classes together, which was logistically very hard to do! But we thought it was worth it to help increase a sense of community among the students.

The peer-regulated feedback technique helped students in a number of ways:

1. It helped students get over their shyness.
2. It allowed them to practise speaking about their design idea in a persuasive and clear manner. Focusing on the “Media Triangle” helped students to develop a better understanding of how to use persuasion to help improve their campaigns.
3. It helped students learn to critique productively, since at one time or another all students would be on the receiving end of critical feedback offered by their peers. Students really learned how to hone their questions to be nuanced and deep.
4. It allowed students to cultivate a safe environment and a standard of professionalism (e.g., students wearing ties and even in the classrooms, when it came to presentations)

They focused quite a lot on marketing, persuasion, and the use of the Media Triangle.

Move 4: Prototyping and Practising

Students moved from working out designs to building prototypes of their ideas. The critiquing process continued throughout this phase of the work.

- Students were encouraged to develop methods of communicating their problems and solutions to the judges, and to implement those methods when presenting to the judges. Conceptual drawings, diagrams, virtual models, and videos, as well as physical models and working prototypes were presented.

Advantages, disadvantages, and limitations were considered by the students in choosing their formats. Many chose a combination of a few methods to create the most successful impact.

Move 5: Major presentation

Each group was responsible for pitching their product to the rest of the students and teachers.

As an outcome of so much practice presenting, students came up with creative coping techniques to help them put on a presentation with as much professionalism as possible (e.g., I'm just going to read from cards, I'm just going to look at the presentation, not the audience, etc.).

Similar to the style in the Dragons' Den TV show, students had 1-3 minutes to pitch their product successfully.

Move 6: The Bobcat's Den!

The winning groups presented at a final competition round. This time, the presentations took place in front of all of the participating classes (and any other classes that wanted to watch) and in front of a panel of expert judges from the local business community. Modeling from the show and the students' own input, professionalism and preparedness were stressed. Students knew that they needed to be prepared to answer questions posed by the panel of judges.

What was one "Aha!" moment?

It was the students themselves who helped move us towards being facilitators. We learned that you don't have to be directly over them all the time because they have great ideas themselves – ideas we would have never had! The students will get where you want them to go and likely even farther without you directing them constantly.

The judging panel included a manager from the local Boston Pizza, a local businessman who had patented a number of successful inventions, and the principal of the school. Many parents were eager to come and watch the final round of judging. Some community members have since found out about Bobcat's Den (e.g., a local photographer, members of the school board, and some members of the Marketing and Advertising faculty at Mohawk College), and they have kindly offered their services for any future rounds of judging that will take place.

ASSESSMENT:

Students co-created the evaluation guides that would be used for judging their final products. At the onset of the work, students watched episodes of the Dragons' Den and discussed how the participants on the show were being evaluated by the judges. They came up with a list of criteria and built those into an evaluation framework that they would use in their own competition.

Practice presentations gave teachers a good time to assess students' level of questioning. The practice presentations allowed students to give generalities about their products without having to nitpick the details, but the teachers could see if there were gaping holes in students' thinking.

Assessment also came in the form of constant conferencing with student groups.

Second Year of the Bobcat's Den!

The Bobcats' Den project was done two years in a row. Students were really excited about the project, and every student bought into the work. The teachers also found that it really helped to build community within the school.

The students themselves made the project more personally authentic in the second year. For instance, students struggled in the first year with how broad the scope of the project was — the design solutions ranged from a cure for cancer, to a teleporter, to a specialized wet sponge. Some students became frustrated because it didn't make sense to them that while the idea of a cure for cancer surely ought to win, the actual product had many design flaws and so lost out to a wet sponge, which actually became the winner because it offered a creative, feasible product within a well-executed campaign. In this way, they identified a disconnect between concept/idea and product/solution, and so they decided that the design competition should focus on concepts that could in fact be prototyped and designed to work. For the second year, the scope of the project was narrowed so that design problems and solutions had to be ones that were more realistic and doable, with a workable prototype that could be built within the necessary time frame.