



# Networks of Inquiry and Innovation Aboriginal Enhancement Schools Network

## 2016 - 2017 AESN / NOII Case Study

**School Name:** Hartley Bay School

**School District:** SD#52 Prince Rupert

**Inquiry Team Members:** Cameron Hill                      chill@sd52.bc.ca  
Eva-Ann Hill                      eahill@sd52.bc.ca  
Michelle Jakubec                      mjakubec@sd52.bc.ca  
Ted Moes                      emoes@sd52.bc.ca  
Stephanie Fisher                      sfisher@sd52.bc.ca  
Lynne Hill                      lhill@sd52.bc.ca

**Inquiry Team Contact Email:**

Ted Moes                      emoes@sd52.bc.ca  
Cameron Hill                      chill@sd52.bc.ca

**Type of inquiry:** NOII

**Grade levels:** Primary (K - 3), Intermediate (4 - 7), Secondary (8 - 12)

**Curricular area(s):** Applied Design, Skills & Technology, Arts Education, Career Education, Language Arts - Literacy, Language Arts - Oral Language, Language Arts - Reading, Language Arts - Writing, Mathematics / Numeracy, Science, Social Studies

**Focus area(s):** Aboriginal understandings (for example, Traditional Knowledge, oral history, reconciliation), Community-based learning, Core competencies (for example, critical thinking, communication, problem solving), Differentiated instruction, Experiential learning, First Peoples Principles of Learning, Flexible learning, Formative assessment, Growth mindset, Inquiry-based learning, STEM / STEAM

**In one sentence, what was your focus for the year?**

Hartley Bay School focused on PBL/IBL learning process issues identified from last year's project, specifically, the need to develop the following student/school attitudes and capacities: 1. Working with criteria; 2. Working with formative assessment; 3. Nurturing resiliency in the face of challenging tasks or projects; 4. Collaborating effectively.

**Scanning:** Briefly summarize your scanning process. How did you use the four key



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questions as part of the scanning process? What did you notice about the experiences of your learners that were most important to your team?

This year, Hartley Bay School continued its focus on Inquiry Based/Project Based Learning (IBL/PBL). Last Year, we engaged IBL/PBL in a Heritage Fair project, where students selected, researched (using primary and secondary methods), wrote and presented on a topic related to their heritage. Although students experienced success, feedback and reflection suggested “consuming” projects, such as a Heritage Fair, need to be complemented by smaller inquiry tasks and anchor lessons, where learning spirals can be more “tightly wound”, and relevant process/transferrable skills better supported.

Student feedback on the four questions was encouraging, with only the second – “Where are you going with your learning?” – exposing uncertainty. “Principles of Aboriginal Learning” (PAL) are deeply embedded in Hartley Bay School experiential and community based learning traditions. Moreover, team members agreed that our PBL/IBL focus strongly dovetails with both traditional, experiential and community based learning. How best to integrate these pedagogies has been an ongoing topic of discussion.

Our team focused on three OECD principles – the social nature of learning; assessment for learning; building horizontal connections – as the most fruitful for building on last year’s experience.

At the start of the year, the team decided on the following priorities for improving student success in IBL/PBL:

1. Establishing the Relevance of Criteria - Students want to know when they are “done” with something. Teacher driven criteria can seem irrelevant and onerous. Student involvement in setting criteria provides a way to know if they have succeeded. For example, students had difficulty answering the question “What thing should everyone know about Hartley Bay?” without criteria to assist in making a sound judgment as to what that thing might be.
2. Improve “buy in” to feedback/formative assessment(FA) – Students need to understand rubrics and performance scales are an important tool for learning. FA should be understood as a roadmap for success, not a record of failure. For example, students often ignored feedback associated with rubrics, which acquired the reputation as “more work” or “bad news” documents.
3. Develop collaborative work skills – Students need to understand effective



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collaboration is beneficial, even necessary, for some tasks, and that the sum of an effective collaborative effort is greater than the individual inputs. Conversely, individual accountability is necessary for successful collaboration. For example, if students have similar inquiries that may benefit from an interview with an elder, it is respectful to the elder to collaborate rather than do separate interviews; moreover, collaboration is an effective strategy for dealing with the technical complexity (listening, note taking, recording, etc.) of doing an interview.

4. A positive mindset is important to the success of IBL/PBL tasks – Students need to stay positive and learn to deal with the inevitable frustrations and obstacles that arise in an inquiry project. The complexity of an inquiry project can be overwhelming for anyone, not just students. For example, every student avoided some important aspect of the project; for some, it was conducting an interview (very intimidating), for others, it was anything involving writing.

**Focus:** In a few sentences, explain why you selected this area. What changes were you hoping to obtain for your learners?

Our focus was developed through thoughtful reflection of student feedback on the successes and frustrations of last year's Heritage Fair. Standout student feedback included:

"It was fun . . . I liked doing the research and interviewing . . . but I didn't like doing things over again [referring to editing and 'going deeper' activities]" (priority 4)

"Sometimes it was hard . . . sometimes it was confusing what you wanted us to do." (priority 1)

"I didn't like working with a partner. I like to do my own work . . ." (priority 3)

"I hate rubrics now. . . ." (priority 2)

"You always answer my questions with more questions . . ." (priority 2)

"I liked my project, but \*\*\*\*\*'s was better . . . I think my topic was harder though"(priority 4)

"I just guessed at what you wanted . . ." (priority 1)

"It was too long . . ." (gestalt)



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The final comment confirmed our impression that smaller projects would better serve student learning by allowing particular skills to be more clearly targeted, for example, through anchor lessons.

**Hunch:** Describe your hunches about the ways in which practices at the school may have been contributing to the experiences of your learners that were of concern to you.

Hartley Bay School's strong tradition of experiential learning played an important role in the formation of our "hunch". We thought of IBL/PBL as a pedagogy that can readily be layered on existing experiential learning opportunities, but there were obstacles. For example, experiential learning opportunities in Hartley Bay are frequent but often arise unexpectedly as when, for example, esteemed National Geographic photographers unexpectedly showed up at the school ready to do a presentation on their current assignment work. Although interesting and informative, as a "stand alone" event there was no opportunity to leverage their visit for a more meaningful student learning experience.

A sample of the opportunities of the past year include:

- Processing (smoking) Oolichan
- Marine harvesting
- "Site Unseen" art project collaboration
- Making button blankets
- Black Bear genetic diversity survey
- Basketball clinics
- Salmon fry beach seining surveys
- Salmon hatchery activities
- Boating, drone and VHF operation certifications
- GIS and mapping clinics
- Photography/videography clinics
- Marine/Land use surveys
- Traditional Foods and medicine harvesting and processing

While the students gain much from these learning activities, our hunch is their learning experience would be much more meaningful if we could develop IBL/PBL tools – for example, a generic "mini-inquiry" template and the cultivation of an inquiry mindset - that could be invoked on short notice.



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**New professional learning:** What new areas of professional learning did you explore? What resources were most helpful? What specific designs did you use to support the learning of your colleagues?

With the exception of “Mindset”, our professional learning involved repurposing our existing skill set. Briefly:

Mindset – Most of us have been relied on some variation of self-regulation to help students manage learning stress. However, some of us find self-regulation somewhat clinical and unwieldy to implement. Mindset strategies seem ideally suited for addressing student anxieties associated with (IBL/PBL) learning tasks. Further, Mindset is premised on a few elegant, easy to model principles, which, whether consciously held or not, seem to reverberate in the advice of all capable people (mentors, community members, elders, etc.) students interact with.

STEM focus – Hartley Bay School, thanks to district support and funding grants, has amassed an impressive collection of STEM and computer resources. These include “Little Bits” robotic kits, a 3D printer, professional grade A/V equipment, engineering kits, SMART tables, laptops, Ipads, and software. Our team spent considerable time and effort exploring the application of these resources in an IBL/PBL context.

Formative Assessment – Our team is experienced in using formative assessment to further student learning. We made a strong effort to align individual teacher practices in order reduce student confusion as they progress in their learning spirals.

New Curricula – Our team consulted the new BC curriculum to ensure IBL/PBL practices aligned with “core competencies”.

Collaborative Learning – Our team reinvigorated the use of Kagan learning structures and resources (promoted by FNEESC) as the foundation of our collaborative learning component.

**Taking action:** Describe strategies you and your team decided on and how your actions worked out.

The actions taken by our team were directly related to our scanning priorities. Overall, our goal was to ease student anxiety arising from, if not instill a sense of enthusiasm about, the open ended nature and the “many moving parts” of IBL/PBL process. Informal language



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discussions and anchor lessons established a working knowledge of the processes and concepts students needed to be successful in completing IBL tasks with some level of independence.

1. Establishing the Relevance of Criteria – In our planning, we distinguished between “non-negotiable” teacher driven process skills (transferable skills such as writing or research), and content, over which students were encouraged to take ownership. Process skills were framed as a general goal, such as “. . . in well-written descriptive paragraph” or “. . . a narrative video that shows . . .”, which then became the focus of formative assessment discussions and/or anchor lessons. Content criteria were “teased out” from student discussions.

Elementary example: In a unit on habitats, students were given the task of designing and building a shelter for a small animal. Through discussion, criteria for a good shelter were determined to be

- Something that kept the eggs or babies warm
- Protected them and their babies/eggs from predators.

The criteria helped students explore what predation their small animals might face and determine what protection strategies (camouflage, location, etc.) might be successful. Students created their own shelters, put fresh eggs in them and hid them outside in a prescribed area. Shelters were checked daily to see if they were still intact, and students assumed the role of a predator when assessing each other’s shelters. If something disastrous happened to the eggs or shelter, students were encouraged to make changes and try again.

Intermediate example: As part of the “Site Unseen” collaborative art project, students were asked to draw a map and write a paragraph about Hartley Bay. They knew it would be for a West Vancouver audience, but little more. A few students went to the atlas, ready to trace any map of Hartley Bay they may have found. Others, without prompting, began criteria setting: “Does it have to be exact, or can we do it from memory?” By the end of the discussion that followed, we had established these criteria for the map:

- Must be done from memory or imagination.
- Must include details personally meaningful or important to you.

The task was completed in an afternoon. We collectively scored all drawings on a 5 point





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scale (see below). Ambitious students revised their work in order to score higher on the scale.

The paragraph task was reformulated:

“What is the most important thing people from West Vancouver should know about Hartley Bay?”

Through discussion, these criteria were generated:

- Should make sense to people from West Vancouver
- Should be important to all people of Hartley Bay
- Should be something all people from Hartley Bay are proud of
- Should be something unique to Hartley Bay.

Students used these criteria to make an effective judgment about which things were important, and produced a draft in a class session. Another class session was used to assess (again on a 5 point scale) and peer edit/revise.

2. Improve “buy in” to feedback/formative assessment(FA) – Early in the year, students did a “word sort” anchor lesson that established a foundation for subsequent rubric/performance scale use. Students sorted descriptive words commonly found in rubrics (i.e., ‘superficial’, ‘effective’, ‘adequate’, “precise’, etc.) into master categories (1 - No evidence, 2 - Developing, 3 - Meeting, 4 - Proficient, 5 - Masterful). Through discussion, students made connections to their previous assessment experiences in familiar terms (i.e., “Masterful means you get an ‘A’ or is excellent”; “meeting is like three out of five star movie, or when you just get it done without trying too hard”). Once sorted, students used the vocabulary to create a rubric for assessing various art pieces scattered around the school. Using this experience as a foundation, a generic rubric/performance scale was generated and adapted to many tasks in all subject areas. As the year progressed, students would use this vocabulary when discussing their own progress on a task. (“I’m going for mastery on this one”, or “I’m feeling proficient today”). Students became less anxious about rubrics and receiving feedback; they came to accept rubrics more as a pathway to success than as a record of failure.

3. Develop collaborative work skills – Basic collaborative behaviours, and rationale behind them, were modeled in several anchor lessons throughout the year using Kagan collaborative learning ideas. These lessons were often done with simple tasks (i.e., “make a



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list of stuff you might need if stranded on an island”), selected to reinforce the skills or structures important for a pending Inquiry task.

4. A positive mindset is important to the success of IBL/PBL tasks – This was perhaps the most productive innovation of our work this year. By consistently reinforcing that a) Effort is the key to success (“Just try – what is the worst that could happen?”); b) Failure can/should be embraced (“Oh well, it didn’t turn out as you expected – what could you do to make it better?”); c) Reference your success to your previous efforts, rather than those of other people (“Well done- you added more depth to you explanations than you did with that previous assignment . . .”). Students found safety in owning their expectations. Expectations of their own performance were ambitious but realistic, based on knowledge of their own strengths, weaknesses and achievable learning goals. As a result, students were less anxious about engaging IBL/PBL tasks, became more confident in their abilities, and more satisfied with their achievements.

**Checking:** Summarize the differences you made. Were they enough? Were you satisfied?

Our team has facilitated considerable progress in developing a PBL/IBL culture at Hartley Bay School. Students are more familiar and comfortable with PBL/IBL structures and processes. They engage the process readily, are more receptive to feedback and can use rubrics independently. Criteria setting has afforded them a powerful tool for making effective judgments regarding open-ended inquiries.

With the introduction and reinforcement of Mindset strategies, students have begun to self-attribute their success based on their efforts. Making the connection between results and effort seems to have freed students from the burden of meeting externally driven standards – whether from teachers or peers. Students feel confident enough to take risks in engaging a task for which they have no preconceived outcome.

We did not have the time to formally debrief students on where they stood with regard to the “four questions”. However, the year’s work generated a wealth of anecdotal and assessment data in the form of highlighted rubrics and completed projects. These rubrics show differentiated growth within individual projects and between projects over the course of the year. Teasing out which areas have shown strong growth and which areas we need to focus on in the future could be a task the team could visit in the new school year. That students completed their “Site Unseen” assignments in three days (one of those days with a substitute teacher) to a high standard was something that would not have happened at the beginning of the year.





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**Reflections/Advice:** Finish by sharing what you learned from this inquiry, where you plan to go next, and what advice you would offer other schools with a similar interest.

Like any task worth mastering, implementing IBL/PBL learning benefits from a firm and confident facilitator's hand. The metaphysical dimension of the experience has not been lost on us. The very fact we are completing an inquiry project about inquiry projects has afforded us the opportunity to model and reflect on the precise process we are implementing, and to compare our own behaviours to those of our students. What stands out from these reflections is the importance of the "Mindset" piece. A carefully nurtured positive mindset that accounts for the ambiguities and uncertainties of mucking about an open-ended process is crucial if students (and facilitators) are to emerge whole and strengthened in the end. In short, effective modeling of IBL/PBL behaviours is paramount.

Ideally, the measure of effectiveness of IBL/PBL implementation should be how seamless progress through the grades/spirals seems from the student's point of view. The essentials and components of IBL/PBL learning remain the similar from K to 12 and beyond; differences (layers) come in the mechanics and age appropriate tactics. As student progress, they should experience a deepening of knowledge and insight as they take on new inquiry challenges and acquire new "tools". A school team should strive to maintain consistency in assessment practices, modeling of Mindset behaviours, and other processes. Again ideally, in a K-12 school such as ours, the common (inquiry) experience of, for example, smoking Oolichan should belie how a Kindergarten and a Grade 12 student should have very different insights, understandings and connections.

Consequently, a future Inquiry focus for the school could be

1. Maintain and reinforce the processes and practices establish this year.
2. Adapt, improve and innovate as new professional learning becomes available
3. Improve whole school planning, perhaps using a Professional Learning Community model, the implementation of IBL/PBL across the grades
4. Continue efforts to layer or leverage IBL/PBL on the rich experiential opportunities available in the school and community.