


Truth and Reconciliation Through Inquiry-Based Collaborative Learning

Deirdre Houghton 
Nechako Lakes School District &
University of Victoria

Gary Soles 
Nechako Lakes School District &
University of Victoria


Andrew Vogelsang 
Nechako Lakes School District &
University of Victoria


Valerie Irvine 
University of Victoria

Francois “Guy” Prince
Knowledge Holder, Nak’azdli Whut’en

Leona Prince
Nechako Lakes School District

Carla Martin
Nechako Lakes School District

Jean-Paul Restoule 
University of Victoria

Michael Paskevicius 
University of Victoria

Correspondence:

Deirdre Houghton
Nechako Lakes School District
Fort St. James, Canada &
University of Victoria, Victoria, Canada
Email: [dhoughton \[at\] sd91.bc.ca](mailto:dhoughton@sd91.bc.ca)

Abstract

This paper provides an overview of a project conducted at Fort St. James Secondary School in the Nechako Lakes School District, which is in Northern British Columbia, Canada. Three high school teachers from different disciplines (Social Studies, Digital Media, and Carpentry) launched a cross-curricular inquiry-based project in partnership with local knowledge holders and School District 91, focusing on truth and reconciliation, that connected the learners in their high school and the broader community, including knowledge holders from the local Indigenous communities. Those engaged in the project examined questions around what truth and reconciliation meant to the learners and its significance. Resulting products included a legacy wall, installed as a permanent fixture in the school, containing individual learning represented in motifs, design of the feather using wood from around the world, and a video documentary containing interviews from school and community stakeholders. We share information on how to access the video documentary.

Keywords: truth and reconciliation, inquiry, secondary school, K-12, cross-curricular, project-based learning, collaboration, co-teaching



Authors retain copyright. Articles published under a Creative Commons Attribution 4.0 (CC-BY) International License. This licence allows this work to be copied, distributed, remixed, transformed, and built upon for any purpose provided that appropriate attribution is given, a link is provided to the license, and changes made were indicated.

We are grateful to live, work, and play on the unceded, ancestral territories of fourteen First Nations representing the Dakelh, Nedut'en and Wet'suwet'en peoples. We are working diligently towards creating equity for our learners through conscious acts of Reconciliation.

We acknowledge and respect the lək'wəŋən peoples on whose traditional territory the University of Victoria stands and the Songhees, Esquimalt, and WSÁNEĆ peoples whose historical relationships with the land continue to this day.

Introduction

In this paper, we share a project conducted at Fort St. James Secondary School in the Nechako Lakes School District, which is in Northern British Columbia (B.C.), Canada as part of a Master's project. Three high school teachers from different disciplines (Social Studies, Digital Media, and Carpentry) launched a cross-curricular inquiry-based project, focusing on truth and reconciliation, that connected the learners in their high school and the broader community, including knowledge holders from the local Indigenous communities. Those engaged in the project examined questions around what truth and reconciliation meant to the learners and its significance. Resulting products included a legacy wall containing individual learning represented in motifs, design of the feather using wood from around the world, and a video documentary containing interviews from school and community stakeholders. Video files produced as part of the project: [Part 1 \(Introduction\)](#) and [Part 2 \(Documentary\)](#), are also available on our [YouTube playlist](#), which also includes a process video and a reflection video.

Theoretical Framework

Constructivism

The chosen theoretical framework for our masters' project, which includes examining and reflecting upon both our teaching practices and students' opinion of their project building experience, will be through the constructivist approach to learning. Constructivism is "a learning theory which affirms that knowledge is best gained through a process of action, reflection and construction" (Brau, 2020, para. 28). Under this theoretical framework, the learning environment is student- centered, as opposed to a learning environment that follows a stand and deliver model, where learners are "passive recipients of information" (UNESCO International Bureau of Education, 2015, para. 4) and merely memorize and regurgitate facts. Furthermore, under the umbrella of educational constructivism it considers that one's background and life experiences will impact one's learning (Sjoberg, 2010).

Truth and Reconciliation

We have chosen to examine Truth and Reconciliation, which is a part of [B.C. Ministry of Education's Social Studies 10 curriculum](#) (B.C. Ministry of Education, 2018). We have chosen this aspect of curriculum for the following reasons:

- Truth and Reconciliation is often considered a challenging curricular aspect to meet,
- The examination of Truth and Reconciliation has not been locally tackled in a project-based manner,

- We have an extremely diverse school community that includes five distinct Indigenous Communities (Nak'azdli Whut'en, Tl'azt'en Nation, Binche Whut'en, Yekooche First Nation, and Takla Nation).

Literature Review

Our work was informed after a thorough literature review that spans collaborative teaching and learning, inquiry-based learning, and project-based learning. We collaborated with our graduate supervisory committee, which included both Educational Technology and Indigenous Education professors, and we also worked collaboratively with our local school and Indigenous community members and knowledge holders.

Collaborative Teaching and Learning

Collaboration amongst teachers has grown rapidly throughout the 21st century (Pugach et al. 2011). Possible reasons for the rise in collaboration amongst educators could be represented by the argument suggesting “teachers need 8 to be proficient collaborators in order to successfully perform their job” (Vangrieken et al. 2015, p. 18). Furthermore, “education is seen as an important context for students to acquire collaborative skills” (p.18). Collaborative groups, amongst educators, can be created for a variety of purposes and designed with specific criteria, goals, and level of depth of focus. Regardless as to why collaboration in the workforce has increased among co-workers, and more specifically amongst educators, research indicates that this practice provides benefits to educators in the areas of support and idea-sharing (Hedgarrd-Soerensen et al. 2017) and it fosters the improvement of educator scholarship (Yuan & Zhang, 2016). Furthermore, teacher collaboration can assist in strengthening students’ learning processes, and it can foster a positive learning environment.

Students can benefit from teacher collaboration when teachers’ instruction or practice has been further developed and strengthened through collegial mentorship, a valuable characteristic of collaboration. Improvements to one’s teaching practices will ultimately impact learners in a positive manner, as demonstrated through learners’ growing success and achievements. (Vangrieken et al., 2015). Furthermore, teachers involved in the collaboration may adopt practices that are less teacher-driven, and instead, follow conventions that are increasingly more student-driven (Lepareur & Grangeat, 2018). These practices again can support an increase in learners’ success and understanding of concepts being explored and taught.

Teachers and students are not the only beneficiaries of collaboration. Indeed, the school environment can also be positively affected by collaboration amongst educators. Through a meta-analysis of 82 studies on various aspects of collaboration, Vangrieken et al. (2015), identify how collaboration amongst colleagues can change the tone or environment of the school community.

Inquiry-Based Learning

Inquiry-based learning (IBL) is a core aspect of the British Columbia K12 Curriculum with growing interest in other parts of the world. This was a transformative experience to have teachers across disciplines work together and to support learner voice through inquiry-based designs. An IBL environment is one that supports the “process where learners are involved in their learning, formulate questions, investigate widely and then build new understandings, meanings and knowledge” (Alberta Focus on Inquiry, 2004, p. 1). IBL follows a learner-focused

approach, as opposed to traditional teaching practices, that are teacher-focused and follow a stand-and-deliver format, where students merely receive information (Khalaf & Zin, 2018). Ergo, within an IBL environment, students are actively engaged in their learning, through the processes of questioning, collaborating, problem-solving, and reflecting.

Project-Based Learning

Project-based learning (PBL) follows a constructivist teaching methodology, whereby students are active participants in their learning. Within a PBL environment, students get a choice as to what they want their study to focus on. They must develop a question or problem to be solved, related to their area of focus, and it must be designed in such a manner that demands deep thinking or inquiry. Learners must be able to justify or present how or why they arrived at their conclusion, which is usually demonstrated through a project highlighting their authentic learning (Jonassen et al., 1999).

Project Overview

Problem Statement

Student engagement in high school, using traditional instructional methods, are not wholly adequate. This problem is illustrated in the article by Barron and Darling-Hammond et al. (2008), where they state that learners need “meaningful work that builds on. . .prior knowledge and experiences and actively engages...in rich, engaging tasks that help them achieve conceptual understanding and transferable knowledge and skills” (p. 100). With the implementation of engaging, learning activities, including inquiry and project-based learning, learners gain various opportunities to expand on their learning and knowledge through collaboration. Barron and Darling-Hammond further support this as they state that “inquiry thoughtfully interwoven with explicit instruction and well-scaffolded opportunities to practice and apply learning...[enables] learners to question, explain, and elaborate their thoughts and co-construct solutions” (p.100).

In the curriculum overview of the British Columbia Ministry of Education (2018) Social Studies curriculum, educators are provided with flexibility in teaching methods and environments, to support learners. The Ministry states that “Learning can take place anywhere, not just in the classroom” (para 29). Although the Ministry of Education identifies what must be taught, it does not direct “how to organize the time, space, or methods to teach it.” Thus, opening the door for inquiry and project-based learning to engage learners in their learning endeavours.

Planning

As learners will be working in multiple locations on their cross-curricular, project-based inquiry, this project needs to be addressed in multiple phases with distinct contributions from both teachers and learners. As teachers, we needed to decide upon a display of learning. We wanted this display to be done as a collective with the learners’ individual contributions present. We decided on a feather motif and a legacy wall, as the outcome of this project. This was done with the help of local knowledge keepers in our communities. We then had to look at the different spaces of the project, mainly the classroom, computer lab, and the carpentry shop, and how we would interconnect all these rooms in a way that is beneficial for the school, the learners, and ourselves. Once that was completed, we looked at the breadth of what we were trying to do.

For their contributions, the learners engaged a guided inquiry project that culminates with, in part, a motif that will be designed and drawn by the learners. Next, the learners put the design in Aspire 9.0 software in the computer lab and set vectors that worked to fit their design into the allotted area of the feathers they were given. Once that design was completed, the learners went to the carpentry shop where they set the GCode (a vector-based programming language that automates machine tooling) and printed their sections using the Computer Numerically Controlled Router (CNC) (a powerhead tool with a shaped cutter that is controlled by a computer to conduct cutting and carving operations). The learners would then take the finished carving, sand it down, and add colour and stain. Once all the pieces are together, the legacy wall was mounted.

All aspects of the project were recorded using video, picture, or journal contributions for reflective, and documentary purposes. Before the project started, local leaders and school staff were interviewed for a documentary to discuss the possible outcomes of this project on student learning and the aspects of Truth and Reconciliation. Once the project was completed, another documentary was created asking what was learned through this process and the impacts it will have on our school and local community, along with what the learners gained from this multimodal, collaborative, project-based, inquiry process. In accordance with the University of Victoria Human Research Ethics Board, we followed the ethics review protocols to receive approval for this project.

Please view our [Project Pre-Documentary \[YouTube\]](#), which outlines the vision and expectations of the project before it unfolded (Houghton et al., 2020).

Process

After examining what Truth and Reconciliation means to our school and community as a whole, we began our journey of using cross curricular project-based inquiry to commence with a holistic legacy project. This endeavour encompassed almost 4 weeks of our grade 10 learners' Social Studies course, amidst the global Covid-19 pandemic. Our learners began by completing an inquiry-based project focussing on the curricular outcome of "discriminating policies and injustices in Canada and the world, including residential schools...and advocacy for human rights including findings and recommendations of the Truth and Reconciliation Commission" as outlined in the British Columbia Ministry of Education (2018) Social Studies 10 Curriculum (p.1).

Upon completion of their individual inquiry into the curricular content, learners chose one aspect from their inquiry that resonated with them, regarding the necessity of reconciling Canada's past wrongs inflicted upon our First Nations people, culture, and heritage. Next, they turned their chosen focus into a rough drawing on paper, which may have included words or quotes to further strengthen their knowledge and understanding of the significance surrounding the Truth and Reconciliation processes. Once they completed their rough drawing, learners moved to the computer lab where they worked to digitize their designs in the Aspire software. This particular software enabled students to send their motif down to the Carpentry shop, more specifically to the Computer Numerically Controlled (CNC) router. This now enabled students to prepare, carve, and finish their wooden panels. Each learner's piece of wood was designed to fit together to create the overall image of two eagle feathers that are now permanently mounted on the wall in our school's entrance to create a learning legacy wall focusing on the significance of the Truth and Reconciliation processes.

Please visit [Our Project Process Video \[YouTube\]](#) to view our entire documentary process (Houghton et al., 2020).

Documentary

The documentation of the culmination of works produced as part of the cross-curricular inquiry resulted in the [Truth and Reconciliation Documentary \[YouTube\]](#), which is 19 minutes 20 seconds in length.

Educational Technology and Open Access

Technology was central to the execution of this project, from drones, image and video capture and editing for the documentary to trades-based work using a computer numerically controlled machine. We also used an open access approach to sharing our videos using Creative Commons licensing, with consent, and hope the public sharing of our videos will inspire others.

Significance of the Work

This work should be of interest to K12 teachers, leaders, and broader stakeholders. The co-teaching and collaboration time was deeply impactful as a school-wide project on truth and reconciliation with benefits for students, teachers, and community. We recommend the education profession to provide teachers with greater opportunity to move beyond their traditional classroom boundaries to support student learning, but also to create a rewarding professional experience for teachers, and to meet our community responsibilities for truth and reconciliation in an authentic manner that more closely aligns with the First Peoples' Principles for Teaching and Learning (First Nations Education Steering Committee, n.d.).

Conclusions







Cross-curricular inquiry, project based learning, and co-teaching were a positive experience for professional growth and we felt that positivity was passed on to the learners, who were able to learn alongside us. This learning resonated throughout our school as the impact of this project was felt across the community and student voice was shared through the documentary videos. The community discussed the increased connection with the school, Fort St. James, and the local Indigenous communities and hopefully a pathway moving forward, where people's ideas are valued and students and community alike are given a voice in the process of moving forward for truth and reconciliation.

Moving forward, the process developed here will hopefully be used more often in different classes and fields. Though the scale of this project was large, that does not limit its implementation to smaller scale projects. The main effect to come out of this project was community. The classroom, and the participants, came together to converge their perceptions into one piece.

Author's Contributions

Conceptualization: DH, GS, AV, FP, VI; Methodology: DH, GS, AV, FP, VI; Project Administration: DH, GS, AV; Writing draft, review, and editing of text: DH, GS, AV, VI, JPR, MP. Video planning, capture, editing, and review: DH, GS, AV, FP, CM, LP

Open Researcher and Contributor Identifier (ORCID)

Deirdre Houghton  <https://orcid.org/0000-0002-0631-4014>
Gary Soles  <https://orcid.org/0000-0002-9684-6013>
Andrew Vogelsang  <https://orcid.org/0000-0003-3007-1152>
Valerie Irvine  <https://orcid.org/0000-0002-8067-1300>
Francois “Guy” Prince
Leona Prince
Carla Martin
Jean-Paul Restoule  <https://orcid.org/0000-0001-6225-3773>
Michael Paskevicius  <https://orcid.org/0000-0001-7391-0783>

Acknowledgements

We would like to thank and acknowledge: our learners, colleagues, local knowledge holders, and School District 91 for their support.

Funding

We received funding from School District 91 (Nechako Lakes) for the purchase of hardwoods for this project.

Ethics Statement

This project was approved by the Human Research Ethics Board at the University of Victoria under protocol #20-0389, which required support by the Nechako Lakes School District and local Indigenous communities.

Conflict of Interest

The authors do not declare any conflict of interest.

Data Availability Statement

Video files produced as part of the project are available in the following spaces:

- [University of Victoria Research and Learning Repository](#)
- YouTube: [Part 1 \(Introduction\)](#) and [Part 2 \(Documentary\)](#) are available on our [YouTube playlist](#), which also includes a [process video](#) and a [reflection video](#).

References

- Alberta Learning (2004). Focus on Inquiry: A Teacher’s Guide to Implementing Inquiry-Based Learning. Learning and Teaching Resources Branch.
- Brau, B. (2020). Constructivism. In R. Kimmons & S. Caskurlu (Eds.), *The Students' Guide to Learning Design and Research*. EdTech Books.
<https://edtechbooks.org/studentguide/constructivism>
- British Columbia Ministry of Education (2018). Social Studies Curriculum.
<https://curriculum.gov.bc.ca/curriculum/social-studies>
- Houghton, D., Soles, G., & Vogelsang, A. (2020, October 27). *FSJSS-Truth and Reconciliation Documentary Part #1*. YouTube. https://www.youtube.com/watch?v=rYLFKu2w-3s&list=PLAgNpsC5fi15HNezXNttDqF8XsHu_H7hG&index=4

- Houghton, D., Soles, G., & Vogelsang, A. (2021, February 18). *FSJSS-Truth and Reconciliation Documentary Part #2*. YouTube.
https://www.youtube.com/watch?v=x_Z7BVMWmY4&t=0s
- First Nations Education Steering Committee. (n.d.). *First Peoples Principles of Learning*.
<http://www.fnesc.ca/wp/wp-content/uploads/2020/09/FNESC-Learning-First-Peoples-poster-11x17-hi-res-v2.pdf>
- Hedegaard-Soerensen, L., Jensen, C. R., & Tofteng, D. M. (2017). Interdisciplinary collaboration as a prerequisite for inclusive education. *European Journal of Special Needs Education*, 33(3), 382-395. <https://doi.org/10.1080/08856257.2017.1314113>
- Jonassen, D. H., Peck, K. L., & Wilson, B. G. (1999). *Learning with Technology: A Constructivist Perspective*. Upper Saddle River, NJ: Prentice Hall
- Khalaf, B. K., & Zin, Z. B M. (2018). Traditional and Inquiry-Based Learning Pedagogy: A Systematic Critical Review. *International Journal of Instruction*, 11(4), 545-564.
<https://doi.org/10.12973/iji.2018.11434a>
- Lepareur, C., & Grangeat, M. (2018). Teacher collaboration's influence on inquiry-based science teaching methods. *Education Inquiry*, 9(4), 363-379.
<https://doi.org/10.1080/20004508.2018.1428037>
- Pugach, M. C., Blanton, L. P., & Correa, V. I. (2011). A Historical Perspective on the Role of Collaboration in Teacher Education Reform. *Teacher Education and Special Education: The Journal of the Teacher Education Division of the Council for Exceptional Children*, 34(3), 183-200. <https://doi.org/10.1177/0888406411406141>
- Sjøberg S (2010), *Constructivism and Learning*. In: Penelope Peterson, Eva Baker, Barry McGaw, (Editors), *International Encyclopedia of Education*. volume 5, pp. 485-490. Oxford: Elsevier
- UNESCO International Bureau of Education. (2015, May 26). *Most influential theories of learning* [Text]. International Bureau of Education.
<http://www.ibe.unesco.org/en/geqaf/annexes/technical-notes/most-influential-theories-learning>
- Vangrieken, K., Dochy, F., Raes, E., & Kyndt, E. (2015). Teacher collaboration: A systematic review. *Educational Research Review*, 15, 17-40.
<https://doi.org/10.1016/j.edurev.2015.04.002>
- Yuan, R., & Zhang, J. (2016). Promoting Teacher Collaboration Through Joint Lesson Planning: Challenges and Coping Strategies. *The Asia-Pacific Education Researcher*, 25(5-6), 817-826. <https://doi.org/10.1007/s40299-016-0300-7>