Using E-Learning to Build Governance Capacity in the Yekooche First Nation: A Case Study of the Yekooche Learning Centre

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February 2010

Acknowledgements

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Executive Summary

The Yekooche First Nation is a community of approximately 120 people, located about 85 km northwest of Fort St. James in British Columbia and approximately 990 kilometres from Vancouver. The community is remote, accessible only by logging road and since the mid 1990's has been working progressively towards Final Agreement in treaty negotiation.[1] In the fall of 2005, Yekooche First Nation asked Royal Roads University (RRU)[2] and the B.C. Ministry of Aboriginal Relations and Reconciliation to assist them in developing an approach to community-based training that would enable members to assume self-government responsibilities once their treaty was ratified. During this same time, a *Community Skills Inventory* was conducted that identified a critical need for capacity-building in governance, focusing on a wide array of skills related to information and communication technologies (ICTs), administration, health, civil infrastructure, as well as basic job skills. The inventory identified these areas as priorities in preparing community members for carrying out the new governance-related activities.

The establishment of a technology-enhanced community access laboratory was a key recommendation in a follow-up report prepared by Royal Roads University staff to assist members of the Yekooche Nation in using innovative technologies and learning opportunities to: (1) enhance computer literacy skills and abilities; (2) learn governance skills through applied governance training; and (3) mitigate conflict and promote cooperation and interdependent relationships within the community. As well, this community access lab, which was eventually referred to as the "Yekooche Learning Centre," was expected to help band members to stay in the community while they engaged in ongoing learning opportunities, a need expressed by the Chief and Band Council, to ensure that cultural values, established support systems, and a sense of place were maintained. The implementation of the Learning Centre began in April 2007 and support for its continuation from various funding sources continues to the present date.

The purpose of establishing the Yekooche Learning Centre was to assist the Yekooche First Nation in preparing for a post-treaty world through the development and enhancement of e-learning skills within the community. Technology-enhanced learning had the potential to make

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[1] Reaching Final Agreement is Stage Five of the treaty negotiation process in the province of British Columbia. A description of each of the six stages can found on the BC Treaty Commission's website: http://www.bctreaty.net/files/sixstages.php.
[2] Located in Victoria, British Columbia.

both formal and informal learning in the Yekooche community more accessible, relevant, and culturally meaningful.

This research, funded by the Canadian Council on Learning, was designed to investigate how cluster-based learning in the Yekooche Learning Centre could be most effectively used to support community project development within the Yekooche First Nation. A cluster-based learning model had been identified as one of the key strategies for ensuring that the use of the Learning Centre supports community development and self-governance. For the purpose of this research, self-governance refers to a First Nation becoming "self-determining and "self-sufficient" (BC Treaty Commission, 2009). The Commission reports that under the auspices of the treaty negotiation process, each First Nation determines their own unique self-governing structure and the provisions included in this arrangement.

Cluster-based learning is a project-based learning process in which participants learn complementary skills so that there is a built-in interdependency in completing the project and a reliance on sharing expertise and teaching each other the necessary skills. Groups of participants learn to do projects together at the same pace and at the same time so that they support each other in future learning opportunities based on the building of interdependent relationships. Through engagement in cluster-based learning, it is expected that learners will be able to support each other willingly and be able to address any problems that arise later on in the learning process.

The research reported here investigated how the Yekooche First Nation used the cluster-based learning model effectively to ensure that the Yekooche Learning Centre played a viable role in community-based learning and self-governance. The following series of specific questions guided the inquiry:

1. What have been the positive impacts of the Learning Centre? How has cluster-based learning been used effectively to contribute to the Yekooche community? What hopes and dreams are there for the Learning Centre in the community?

2. What other kinds of strategies should be implemented to support and sustain the use of the Yekooche Learning Centre and the cluster-based learning model?

3. How can these strategies be implemented and sustained in a culturally-relevant and inclusive manner?

4. What resources and skills are required to assist First Nation communities in accessing learning opportunities in preparation for assuming self-governance in a post-treaty environment?

5. What attributes of this learning model have potential relevance to the adoption of e-learning technologies in other aboriginal communities in Canada?

The research project adopted a participatory action research (PAR) approach that investigated how technology-enhanced, cluster-based learning processes can best be employed to support the effective use of the Learning Centre in the Yekooche community. The strong emphasis on community development in the development and implementation of the Yekooche Learning Centre supported the use of a participatory action research methodology. Within a PAR framework, community members and researchers work together to decide how the research will be conducted, how the data will be analyzed, and with whom the results will be shared. This collective and collaborative approach strives to ensure that the inquiry process is transparent and accessible to community members. As well, the participatory nature of action research creates opportunities for mutual and shared learning between the researchers and the community by involving members of the community as researchers (Frisby et al. 2005).

It was important that the specific participatory action research model used in the study support a sense of optimism and growth for the community. The focus was on documenting and sharing what could be learned from the positive experiences associated with developing and implementing a technology-enhanced, community learning approach. As a result, Appreciative Inquiry (AI) was used as a framework within the research study. In adapting AI to the current project, the research process focused on the process of exploring, documenting, analyzing, interpreting, and sharing what has worked in technology-enhanced, cluster-based learning within the Yekooche community. The intent was to share these insights with audiences, both internal and external to the community, in the hopes of influencing the development of both current and future practices associated with technology-enhanced, cluster-based learning.

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The research was divided into four phases: Discovery; Dream; Design; and Delivery. These four phases were consistent with the most prevalent models of Appreciative Inquiry employed in a wide range of organizational and community development applications. The research used a case study methodology to document how these four phases unfolded in practice and how they contributed to significant insights regarding the effective use of cluster-based learning.

Multiple data gathering strategies were used in the Yekooche study to provide triangulated data sources and interpretations as well as to help reveal multiple perspectives towards cluster-based learning. Qualitative data were gathered from Learning Centre participants, the Centre's project coordinator, the Chief and Council, and other community members through the use of interviews, informal conversations, small-group discussion processes, analysis of case study documents, archival document review, analysis of Learning Centre products and projects, and ethnographic field notes.

Research team composition followed an insider/outsider model and included a researcher from Royal Roads University who served as the project manager and the principal writer, the project coordinator who served as both a data collector and a participant, and a member of the Yekooche First Nation, who, in addition to being a participant in the Learning Centre, was trained on how to gather stories from her peers who accessed the Learning Centre's services.

The results from the study provided insights into how a cluster-based learning infrastructure can be developed that effectively helps community members access and use technology to support learning and community development. According to the findings, the Learning Centre had emerged as a very important and central place within the Yekooche community. It had a number of significantly positive benefits for community members, such as its role in encouraging skill development, the development of individual and community projects, increased access to other outside resources and support for cultural development and ongoing learning, the formation of a community gathering place, and the opportunity to showcase experiences and impact with outside organizations. A wide range of both individual and, more recently, group projects have been produced that feature media-rich elements such as video, audio, graphical, and textual elements that have been enhanced by the skills participants have acquired in the Learning Centre. The Centre has helped the community take important steps

forward towards enhancing the knowledge and skills – like project-based learning, technology-based communications, administrative and technical management of learning technologies, collaborative development and implementation of community projects – that community members will find helpful in a post-treaty world. This has been accomplished by serving as a catalyst for individual creativity and self-expression, by helping to build self-confidence and risk-taking, and by stimulating interest in engaging in the shared pursuit of common interests via cluster-based learning.

Before the project was initiated, there was expectation that a cluster-based learning model would be used right from the beginning to encourage and motivate collective participation in the Centre's activities. In reality, this was not the case. One of the key insights not anticipated at the onset of this study was the importance of valuing and fostering individual engagement and curiosity intensely before the cluster-based learning approach could be encouraged and even supported later in the implementation process. The most successful approach to cluster-based learning that emerged from the study was based on helping individuals explore their own interests first, encouraging them to gain confidence in learning, and then, enabling them to form natural clusters with other learners who had shared interests.

A key enabler in the cluster-based learning process has been the emergence and evolution of an approach to learning and teaching that maximized the opportunities for participants to pursue their own interests and to find ways to make a difference through their technology-enhanced learning opportunities. This democratized, participatory learning approach included the following key characteristics: creating a welcoming environment; being patient and observing first; letting go of assumptions about learning; engaging curiosity; and supporting the next steps.

The research also led to the discovery that the more that people became aware of the impact that the new teaching and learning approach was having on numerous individuals involved with the Learning Centre, the more opportunities were created to extend the learning to other community members as well as to create clusters of interest in group initiatives that had more broadly-based benefits in the community.

Another positive outgrowth of the project was the creation of an evaluation model that has become a central and even critical part of the knowledge mobilization process. This is an outcome that could not have been anticipated at the beginning of the project. The purpose of this evaluation process is to collaboratively create a framework for enabling the Yekooche Nation to tell its own stories about the impact of the Learning Centre on participants, on the community, and on contributing partners.

The findings shared within this report also shed light, not only on the most viable cluster-based learning approach, but on other strategies as well that can continue to support and sustain the use of the Yekooche Learning Centre. One key strategy involves questioning and, even suspending, assumptions about the most appropriate ways to implement technology-based learning strategies in remote communities like the Yekooche First Nation.

Although there have been various ways of disseminating the results of the Yekooche Learning Centre project and its associated research studies, a very promising development is the emerging interest of participants in creating and experimenting with their own ways of telling the stories of their involvement by making use of the skills that they are acquiring and enhancing in the Learning Centre. These approaches include video-taping key aspects of community life, participating in video documentaries, creating blogs, developing a Learning Centre website, and making CDs. The ongoing sharing of these stories will help address a time-dependent limitation of this report. As a snapshot taken at a particular time, the study does not represent the full range of voices within the community regarding the impact of the cluster-based learning approach.

Finally, this research provides important insights about the use of Appreciative Inquiry as a research methodology in an Aboriginal context. The focus on the positive experiences in the implementation of cluster-based learning in the Learning Centre provides a refreshing alternative to more traditional, deficit-based or problematized approaches to research. This research has confirmed the positive value of using an approach to systematic inquiry that focuses on the positive successes achieved. Nevertheless, caution must be used in the application of a pre-established Appreciative Inquiry 'model' to avoid an overly-structured and artificial experience for participants that limits both their engagement in the process and the potential outcomes of the inquiry effort.

Introduction

The Yekooche First Nation in north-central British Columbia is one of eight First Nations currently in Stage 5 negotiations[3] to finalize a treaty with the provincial and federal governments (BC Treaty Commission, 2009). They have identified a critical need for additional training in a wide array of areas, such as information and communication technologies (ICTs), administration, health, and civil infrastructure that will enable its members to adapt more easily to self-governance in a post-treaty environment.

This research is part of a larger project supporting the Yekooche's efforts to achieve self-governance. Royal Roads University (RRU) is working collaboratively with members of the Yekooche First Nation, and with the support of the BC Ministry of Aboriginal Relations and Reconciliation (MARR), Indian and Northern Affairs Canada (INAC), and Enbridge Gateway Pipelines Inc., to develop a shared, neutral learning space – the Yekooche Learning Centre (YLC) – for training, mentoring, and e-learning support. The creation of the Learning Centre has resulted from a recent study, jointly conducted by RRU and the Yekooche nation, which examined the gap between adult learning opportunities available to members of this small remote community and its ability to benefit from these opportunities (Drummond, 2006). The establishment of the Centre, a key recommendation in the Drummond report, was proposed to assist members of the Yekooche Nation in using innovative technologies and learning opportunities to: (1) enhance computer literacy skills and abilities; (2) learn governance skills through applied governance training; and (3) mitigate conflict and promote cooperation and interdependent relationships within the community. As well, the Learning Centre was expected to help band members stay in the community while they were continuing to learn, a need expressed by the Chief and Band Council, to ensure that cultural values, established support systems, and a sense of place are maintained.

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[3] According to the BC Treaty Commission's policy and procedures, Stage 5 refers to the negotiation that occurs to finalize a treaty that formalizes the new relationship between the First Nation and the Provincial Government. The treaty builds on the agreements reached in previous stages of negotiation. Stage 5 concludes with the signing and ratification of a unique constitutional instrument outlining the principles, rights, obligations, and other subjects specified and agreed to in the negotiation process.

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Research Purpose

The establishment of the Yekooche Learning Centre was a necessary, but not sufficient, strategy for ensuring that e-learning provided a viable means of enhancing learning opportunities for members of the Yekooche Nation. Building the community's capacity to use learning technologies to acquire enhanced skills and knowledge and to improve the educational opportunities of Band members was considered an important foundational step along the pathway towards effective self-government. Technology-based learning and management strategies needed to be developed, implemented, and evaluated that derived maximum benefits from the Yekooche Learning Centre while honouring Yekooche customs, values, and culture. Furthermore, the Yekooche First Nation has used a community learning model, a cluster-based learning approach, successfully in other training contexts. Cluster-based learning is project-based, community-oriented, and highly participative. Band members as well as professionals working in the community were interested in determining if this model would work effectively in supporting the development of community projects that would serve as helpful and significant learning opportunities on the road to achieving and supporting self-governance.

The over-arching purpose of the Yekooche Learning Centre project was to assist the Yekooche First Nation in preparing for a post-treaty world through the effective use of e-learning technology and support. The research in support of the project was designed to investigate how cluster-based learning in a centrally-located learning space, a Yekooche Learning Centre, could play a viable role in community-based project development and self-governance within the Yekooche First Nation. The research addressed the following series of questions:

1. What have been the positive impacts of the Learning Centre? How has cluster-based learning been used effectively to contribute to the Yekooche community? What hopes and dreams are there for the Learning Centre in the community?

2. What other kinds of strategies should be implemented to support and sustain the use of the Yekooche Learning Centre and the cluster-based learning model?

3. How can these strategies be implemented and sustained in a culturally-relevant and inclusive manner?

4. What resources and skills are required to assist First Nation communities in accessing learning opportunities in preparation for assuming self-governance in a post-treaty environment?

5. What attributes of this learning model have potential relevance to the adoption of e-learning technologies in other Aboriginal communities in Canada?

The use of e-learning as a key strategy to enhance self-governance provides a compelling vision for the future of the Yekooche First Nation. It is based on the recognition of the importance of lifelong learning in today's knowledge-based society. As a result of historical, cultural, geographical, socio-economic, infrastructure, and systemic forces (Royal Commission on Aboriginal Peoples, 1997), Aboriginal peoples have not had equal access to learning opportunities in general, and with respect to this initiative in particular, adult and workplace-related training. The workplace-related training that is currently in high-demand among Aboriginal peoples is training related to self-government, such as skills associated with administration, health, civil infrastructure, and information and communications technologies (Royal Commission on Aboriginal Peoples, 1997). Members of First Nations will step into new positions in their own bands and yet may lack a range of skills – both basic and job specific – to adequately meet the requirements of self-governance. Project-based e-learning, principally delivered through the establishment of the Yekooche Learning Centre, has the potential to make both formal and informal learning in the Yekooche community more accessible, relevant, and culturally meaningful. This study sought to determine and understand the most effective ways of using cluster-based learning in the Yekooche Learning Centre to fulfill this potential.

How the learning environment is structured and how the learning is delivered are important considerations as the Yekooche First Nation strives to upgrade and enhance the skills and competencies of its community members. For Aboriginal peoples, including the Yekooche First Nation, to be able to fully realize lifelong learning opportunities, they must develop the learning processes that maximize the use of the e-learning technological infrastructure (First Nations Technology Council, 2006; Greenall & Loizides, 2001). Thus, the knowledge gained on how cluster-based learning was implemented will provide information and tools which will, hopefully, be helpful to other Aboriginal peoples and communities that are trying to address the capacity gap in adult learning while preparing for self-governance.

Background

The Yekooche First Nation

The Yekooche First Nation is a community of approximately 120 people, located about 85 km northwest of Fort St. James, British Columbia, and approximately 990 kilometres from Vancouver. The community is remote, accessible only by logging road and has since the mid 1990's been working progressively towards Final Agreement in treaty negotiation. Reaching Final Agreement is Stage Five of the treaty negotiation process in the province of British Columbia involves agreement on technical and legal issues required to finalize the treaty after preliminary agreements have been reached on matters related to land use, governance, social development, resources, education and other matters of importance to the First Nation. Stage Five also concludes with a vote on the Final Agreement by the First Nation as well as provincial legislators in British Columbia and federal legislators in Canada.

The Yekoochet'en (people of Yekooche) lived in the Stuart Lake area for thousands of years and in 1994 broke away from Tl"azt"en Nation to form their own community taking their four reserve areas with them and which became known as the Yekooche First Nation. The traditional language of the Yekoochet'en is Carrier. **Ye Koo Che** in Carrier translates to the location of the community as "Ye Koo" refers to Cunningham Lake and "Che" refers to the end or tail of Nankut Creek.[4]

Until recently, the community had been beset with social problems such as significant inter-family conflict, health problems including substance abuse as well as a high rate of unemployment (90-100%) (Drummond, 2006). However, according to Drummond's report (2006), the community reached a turning point in 2001. Community leaders began implementing a series of initiatives for addressing on-reserve substance abuse, and other health-related issues. Then, through economic development and job creation, they were able to sustain these changes. This led to the beginning stages of the negotiation of a treaty with the provincial and federal governments and then to the eventual signing of an Agreement-in-Principle (AIP) to negotiate a treaty for self-governance in August 2005. Consequently, the Yekooche First Nation is now in

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[4] From Yekooche (2008), *History of our People*, Yekooche First Nation website retrieved July 29, 2008 from http://yekooche.com .

the final stages of treaty negotiation. The ability of a small First Nation to achieve an AIP (there are only four other signed AIPs in British Columbia) is a remarkable testament to the community's desire to control its future. All three parties – Indian and Northern Affairs Canada (INAC), the BC Ministry of Aboriginal Relations and Reconciliation (MARR) and the Yekooche First Nation, (YFN) – to these treaty negotiations recognize that when the treaty is concluded, Yekooche First Nation will be required to exercise more self-determination, responsibility, and control than it currently holds regarding land use, law-making authority, system of government, use of resources on its territorial land, social development including health and education, and preservation of culture . As a result, there is a current and significant need for community members to develop the capacity to manage these kinds of responsibilities in a post-treaty world.

In the fall of 2005, Yekooche First Nation asked Royal Roads University and the Ministry of Aboriginal Relations and Reconciliation to assist them in developing an approach to community-based training that would enable members to prepare to assume self-government responsibilities once the treaty was ratified. During this same time, a *Community Skills Inventory* (Yekooche First Nation, 2005) was conducted that identified a critical need for capacity-building in governance, including the enhancement of skills related to information and communication technologies (ICTs), administration, health, and civil infrastructure as well as basic job skills to prepare its members for carrying out the new governance-related activities. This study identified that approximately 30 members over the age of fifteen were interested in employment related to self-government, such as those related to community development, public works, health and safety, education, and childcare. A comparable number of community members were interested in technology training.

The Yekooche First Nation has completed two studies to determine the extent of the community's knowledge assets: the aforementioned *Community Skills Inventory* and a *Comprehensive Community Planning Project* (Yekooche First Nation, 2006). An outgrowth of these studies was the broadly-based recognition that extensive learning had to be undertaken at a community-wide level to adequately prepared for self-governance. As a next step, a majority of Yekooche community members began the process of completing individual learning plans which is a key step that the First Nations Technology Council (2006) recommends in mapping community assets. The number one need expressed in these analyses was enhanced ICT-related

skills such as learning how to use software programs such as Microsoft Word, Excel, Outlook, and PowerPoint, how to access web-based information and resources, how to use email and other communications technologies such as web-based conferencing, how to use specialized programs to support audio and video production, as well as how to operate and maintain software, hardware and networks. As part of this asset mapping, band members and researchers from Royal Roads University collaborated to assess the existing ICT-related resources in the Yekooche community, to identify any social or technical barriers or gaps that may exist in pursuing these learning opportunities, and to make recommendations on how to close the identified gaps (Drummond, 2006). The project report recommended that a Yekooche Learning Centre be established for training, mentoring, and e-learning support.

The Federal government, through the implementation of its action plan to facilitate transfer-of-authority arrangements recommended in the Royal Commission on Aboriginal Peoples, has recognized the important link between the acquisition of education, skills, and training and our First Nations capacity for effective self-governance (Royal Commission on Aboriginal Peoples, 1996; 1997). Aboriginal people have lower participation rates and achievement levels within formalized educational programs. This is exacerbated by higher drop-out rates, especially on reserves, making the acquisitions of employable skills and knowledge even more difficult to obtain (Conference Board of Canada, 2000; Loizides & Zieminski, 1998).

In addition to strengthening First Nations capacity to self-govern, Greenall & Loizides (2001) cite three important benefits to Canada and our Aboriginal peoples in finding ways to address the capacity gap identified above. First, because the Aboriginal population is the fastest growing segment in Canadian society, finding ways to enhance the skills and employability of this segment will help address future anticipated labour shortages across the nation. Secondly, maximizing the employment opportunities for Aboriginal workers reduces the reliance on public sector social programs, especially during a time when these programs are being increasingly stretched by the numbers of retirements within the aging, non-Aboriginal segment of the Canadian population. Lastly, the advent of a global marketplace coupled with improved access to information technologies means that our Aboriginal people have increased access and more opportunity associated with competing globally for increased business initiatives.

The British Columbia government's Premier's Technology Council (2002) has recognized that a similar "capacity gap" bedevils most small and remote communities in British Columbia. Both studies identified the inability of these remote, often resource-based communities to access the learning opportunities that would allow them to keep pace with Canadian society. For this reason, knowledge about how to address the gap, and the supporting learning models, should prove valuable to other remote communities, Aboriginal and otherwise.

Learning in First Nations Communities

The Canadian Council on Learning (2007) reports that current data and research on Aboriginal learning tends to focus on a narrow range of indicators and currently provides limited understanding of the nature of experiential, lifelong, community-based learning valued by Aboriginal peoples that goes beyond participation in formalized, non-Aboriginal educational programs. The current available data undervalues the central role that community plays in Aboriginal learning that helps to ensure that learning: (1) reflects Indigenous ways of knowing, cultural traditions, and values; (2) is guided by a strong spiritual orientation; (3) happens holistically and integratively at emotional, physical, spiritual, intellectual, and communal levels; (4) stresses the important and diverse roles that parents, family, and Elders serve as facilitators, advocates, and guides; (5) reinforces that learning is a lifelong endeavour central to all stages of social, cognitive, and spiritual development; (6) is experiential and informed by engaging in regular community interactions and activities; and (7) is an adaptive process that integrates Aboriginal and Western knowledge (Canadian Council of Learning, 2007; Royal Commission on Aboriginal Peoples, 1996).

The Learning Centre was viewed by leaders in the Yekooche community as well as advisors from Royal Roads University as a means for facilitating the integration of these attributes of Aboriginal learning into a locally-based educational strategy. This strategy would was intended to help community members learn successfully in individual, small group, and community-wide contexts with the assistance of technology and without having to leave their home community (Drummond, 2006). Thus, as a result, the Yekooche Learning Centre was designed and initially conceived to facilitate access to technology and provide opportunities to engage in learning processes that facilitated the meaningful, accessible, and relevant use of the technology.

Use of Technology to Support Learning in First Nations Communities

Information and Communication Technologies (ICT) skills and abilities can produce transformative changes regarding social, economic, cultural, and community development with our First Nations peoples (First Nations Technology Council, 2006). As in other remote and geographically-isolated communities, ICT services provide opportunities for the Yekoochet'en to have increased access to learning opportunities not currently available in the local community. As a result of the remoteness of the community, many skills may need to be acquired at a distance via Internet-based technology. Thus, as Battiste & McLean (2005) observe, e-learning has the "potential to promote language, culture, and community connectedness, particularly among isolated communities" (p.12).

Nevertheless, technology must be used in a culturally-relevant manner if it will successfully support self-governance (First Nations Technology Council, 2006; Battiste & McLean, 2005; Greenall & Loizides, 2001). This means that it must be used in ways that support, reflect, and enhance "Aboriginal traditions, values, and practices" (p.10). Technology should be used to communicate and celebrate cultural knowledge, traditional skills, important worldviews and frames of reference within First Nation communities and beyond. What is missing is the learning infrastructure – the processes by which community members access and use technology to support learning.

The development of this learning infrastructure can only be achieved when First Nations communities have greater control over educational programming and delivery strategies and are able to ensure that educational strategies link to learning practices within their own communities (Battiste & McLean, 2005). Moreover, Greenall & Loizides's (2001) participatory research with ten Aboriginal communities across Canada discovered that the successful use of learning technologies involved more than just the establishment or delivery of the technology. It was also dependent on the ability of the community to adapt the technology to support local needs and to mobilize community participation and resources to support its use. Furthermore, Greenall & Loizides discovered that linking the use of technology to culture, traditions and values was a key characteristic of successful Aboriginal technology initiatives. Examples of this linkage include; getting Elders involved in using the technology by using it as medium for recording and/or

documenting traditional stories, knowledge and skills; using concept mapping software to help students learn concepts using relational as opposed to hierarchical models of knowledge creation and representation; using Internet-based search technologies to research traditional tribal apparel and clothes.

As noted above, Yekooche is not the only Aboriginal group facing the challenges of introducing enhanced ICT capability into its community. Although it was one of the first of the very remote communities to attain high-speed Internet capacity, this capacity is currently being delivered to 188 of British Columbia's most remote Aboriginal communities as the strategic plan of the First Nations Technology Council (2006) is implemented. Therefore, documenting the lessons learned in the establishment of the Yekooche Learning Centre serves a valuable purpose not only to the Yekooche First Nation but potentially to other Aboriginal communities as well. Thus, this research responds to the need Aboriginal communities have identified for a heightened understanding of the kinds of technology-enhanced initiatives that "build learner capabilities and skills while at the same time fostering pride in and strengthening community links, beliefs, and traditions" (Greenall & Loizides, 2001, p.20).

A cluster-based learning model had been identified by community members as one of the key strategies for ensuring that the use of the Learning Centre technologies supports community development and self-governance. It was envisioned that implementing the model would involve the creation of "organic groupings" of participants which draw on the group's knowledge and experience as a whole to enhance each person's learning experience (Millar, P., personal communication, 2006). These groups of individuals would work on projects that supported advancement in practical, hands-on skills as well as serving as a means of capturing traditional knowledge held by older members of the community. In a cluster-based learning model, working with a skilled mentor or instructor, groups of people learn to do projects together at the same pace and at the same time so that they can support each other in future learning opportunities based on the building of interdependent relationships (Drummond, P., personal communication, 2009). This approach had been previously successful in helping Yekooche community members

learn a number of "public works-related" skills by working together in small groups to share expertise and help each other learn.[5]

To build on previously successful practices, there was strong interest in the community in applying the cluster-based learning approach to support the use of the Learning Centre. This would provide an opportunity for groups of five or so individuals to learn from each other in the process of acquiring key skills. This group-based process was referred to as training for redundancy (Drummond, 2006). Training for redundancy was expected to reduce the stress and the risk on the individual and on the community by spreading the responsibility within the group. If an individual should leave the community, or is unable to continue in his/her role, others within the group would be able to continue developing the collaborative skills acquired through cluster-based learning.

Cluster-based learning can be considered a form of authentic project-based learning that relies on the development of a supportive learning community. Project-based learning involves the organization of learners into teams to address challenging tasks, problems, or issues that serve as catalysts for the learning process (Helle et al., 2006: Thomas, 2000). Learners play key roles in determining the process for investigating the task, deciding on the kinds of strategies for addressing the issue, and generating the specific outcomes from the assignment. Learners usually spend extended periods of time working in their groups to facilitate the culmination of authentic products that respond to the challenging tasks (Thomas, 2000, Blumenfeld et al., 1991).

In his research review, Thomas (2000) articulated five essential characteristics of project-based learning. Thomas ascertained that, when used effectively, projects: (1) are central to the curriculum and are the central teaching strategy; (2) focus on questions or problems that motivate students to understand and wrestle with the central concepts and principles of a underlying area of focus or discipline; (3) involve students in a constructive, knowledge-building, inquiry-based process; (4) are student-driven and require a great deal of autonomy, choice, and responsibility; and (5) are realistic and authentic, not "school-like."

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[5] This model proved successful in Yekooche, where it was used by Larry Finden, Manager of Pubic Works for the Yekooche First Nation, to train and mentor the public works cluster – five young men who successfully mastered a range of skills. Finden suggested that training for Aboriginal learners who have not had success in the mainstream educational system follows the steps: 1) mentor; 2) be concrete; 3) be tactile; 4) teach through discovery, not explanation; and 4) require partnering and passing it on. (Larry Finden. Personal Communication, May 25, 2006) (Godfrey, 2006).

Authentic learning can be described as experiences "characterized by a high degree of personal relevance" that permit learners to practice skills in environments similar to those in which the skills will be used (Lebow, 1993, p.7). Newman & Wehlage (1993) viewed these experiences as having real-world relevance and being consistent with the kinds of tasks, activities, or experiences a person would encounter at work, at home, or in the community. Authentic learning activities usually involve complex tasks that are used to investigate ill-defined or messy problems over a sustained period of time (Reeves, Herrington, & Oliver, 2002). These kinds of activities help learners achieve four major objectives in learning: (1) to make connections between personal interests and how the tasks are performed in real life; (2) to be more motivated to engage and persevere as a result of the relevance of the activity; (3) to facilitate absorption, retention, and transfer of skills and knowledge; and (d) to provide a sense of enculturation into the workplace, profession, or discipline (Lombardi, 2007).

Learning communities enable students to actively engage with one another and to work collaboratively together to address complex issues. When learning communities are cohort-based, they provide a powerful means for learners to collectively construct their own knowledge sets, engage in the achieving of shared goals, enhance the process of meaning making, develop or enhance professional identities, and reinforce perseverance to complete the course or program (Wenger, 2006). There have been numerous studies that have explored the impact of learning communities and student peer groups on educational attributes such as the enhancement of student persistence, achievement, and satisfaction (MacGregor, 2000). As many researchers studying cooperative and collaborative learning have noted, "small-group learning can be powerful for students… these experiences can be provocative, informative, and valuable -- is the stuff of long-lasting learning" (MacGregor, 2000, p 59). Previous research on cohort-based learning, reported in Barnett & Muth (2008), has discovered benefits in competencies that have real-world relevance such as collaborative learning and self-reflection (Burnett, 1999; Leithwood, Jantzi & Coffin, 1995; Norton, 1995) and enhanced interpersonal skills (Browne-Ferrigno & Muth, 2003; Horn, 2001). Furthermore, Cooke (2001) argues that learning and trust are by-products of clusters, emphasizing that the trust factor is what holds a cluster together.

In summary, cluster-based learning was envisioned as a project-based, authentic, and collaborative means of helping the Yekooche people make the best use of technology to support

community development and eventual self-governance. The approach was designed to incorporate many exemplary practices related to First Nations learning such as building trusting and respectful relationships, empowering learners to make their own decisions in advancing the learning process, supporting the development of the whole person, and resulting in practical and applied products (Battiste, 2005).

This research project provided the opportunity to explore the impact, use, and sustainability of technology-enabled, cluster-based learning in the Yekooche community. To assist in understanding the specific context in which cluster-based learning was applied, the next section describes helpful background information regarding the initial development of the Learning Centre within the Yekooche community.

Establishment of the Yekooche Learning Centre

The establishment of the Yekooche Learning Centre was the first phase of a three-phase project initiated between Yekooche First Nation and Royal Roads University in September 2006.[6] The three phases provided a systematic means of developing self-governance capacity within the Yekooche community, moving progressively from a mentor-supported to a community-run model. The three phases involved a progression of learning activities that started with face-to-face, facilitated training in the first phase, a blended approach of face-to-face and online learning in the second phase, and then a planned integrated approach to governance training in the final phase. The research reported in this study focused on the activities within the first and second phases of the project.

To launch the project, a project team from Royal Roads University travelled to the Yekooche community in May 2006 to help assess and document the existing technical resources and technological infrastructure in the village. The objective was to identify any social or technical barriers that existed in developing technology-enhanced learning opportunities. As well, the resulting report (Drummond, 2006) made recommendations regarding what would be required through the use of learning technologies to enhance the capacity for the Yekooche First Nation to govern more effectively in a post-treaty world (Drummond 2006).

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[6] Yekooche First Nation & Royal Roads University: Governance Capacity Building. (2006). *An E-Learning Development Proposal.*

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Initial meetings and teleconferences were held with the Yekooche Chief and Council, as well as representatives from Indian and Northern Affairs Canada (INAC) and the BC Ministry of Aboriginal Relations and Reconciliations (MARR) to gauge the community's interests in using technology to enhance community-based learning opportunities. During visits to the community, the project team was able to observe the use of the existing technology, first hand, which greatly added to the picture that was emerging about the current state and the potential benefits of technology-enhanced learning. Coinciding with these visits was a series of informal discussions and presentations with Yekooche members that demonstrated the capacity of the technology to connect outside resources to the community. During these sessions, the project team was able to test out the existing technological infrastructure as well as gather informal perspectives from community members on its use, benefits, concerns, and challenges.

Although the technology existed in the Yekooche community and high-speed connectivity was available to each of the homes, there were several issues that constrained or prohibited home use of computers. These factors included minimal computer literacy, as well as the costs of hardware, software, and individual connections to the Internet. At the time, despite the wiring being in place in individual homes, Internet access was limited to children attending school, potentially leading to heightened sense of exclusion, disconnect, and alienation among community members already living in a geographically-isolated community. As Drummond (2006) indicated, this situation was further exacerbated by the limited number of trained people in the community that could support the technical infrastructure and manage the learning-related resources.

Drummond (2008) reported that there were also "concerns for site security of a community-accessible space" and "conflicting community ideals and perceptions around how the technology should be used" (p. 3). Furthermore, conversations with Yekooche members and community professionals revealed the presence of intra-family and inter-family conflicts and perceived injustices. She indicates that "this had the potential to create further barriers for learning, leaving some to question who is attending and participating, who is benefitting and who is not, resulting in some individuals pulling out of a learning opportunity all together" (p. 3). On the flipside, initial interviews conducted by Drummond (2006) revealed that some community members expressed concerns about the isolation of members who leave the community to pursue

their education elsewhere and how the lack of family and community support while they are away can be difficult to manage. Furthermore, an individual may not return to the community after being away in school or university, further fragmenting the family and the Band. Therefore, developing the means of accessing technology-enhanced learning opportunities within the community was viewed as a favourable alternative compared to having community members leave to pursue further educational aspirations.

Subsequent to the project team's visits, a recommendation was made to Chief and Council to develop a shared, neutral learning space initially called a "community access lab" – for training, mentoring, and e-learning support. The focus of the lab was to assist community members in using technology to: (1) enhance computer literacy skills and abilities; (2) learn governance skills through applied training; (3) provide training for managing the technical and administrative infrastructure; and (4) mitigate conflict by promoting cooperative, collaborative, and interdependent relationships within the community. As well, the lab would enable band members to continue to learn in the community, supported by existing community and cultural values, familial systems, and an ongoing sense of place.

In September 2006, a Memorandum of Understanding was signed between Yekooche Chief and Council and Royal Roads University. The shared vision for this project was to establish a collaborative partnership between a First Nation, a university, and a provincial government to create a shared, neutral community space that would enable technology-enhanced learning to support both individual and community development and help build governance capacity in a post-treaty world. The collaborative three-way partnership provided members of the Yekooche First Nation with access to resources and expertise that they did not have within the existing community.

This MOU, along with funding by the Ministry of Aboriginal Relations and Reconciliation and other agencies and private organizations helped to launch a six-seat computer lab, which came to be known as the "Yekooche Learning Centre," in March, 2007. Funding from various external sources continues to provide support to the Yekooche Learning Centre up to at least March, 2009.

The remainder of the report focuses on the description of the case study research undertaken to document, describe, analyze, and reflect upon the cluster-based learning model and the resulting outcomes that supported the use of the technology introduced within the Yekooche Learning Centre (YLC).

Methodology

Participatory Action Research Model

The research project adopted a participatory action research approach that investigated how cluster-based learning processes can best be employed to support the effective use of the Learning Centre in the Yekooche community. The strong emphasis on community development in the implementation of the Yekooche Learning Centre supported the use of a participatory action research (PAR) methodology. Action research, according to Stringer (1996) is "a collaborative approach to inquiry or investigation that provides people with the means to take systematic action to resolve specific problems" (p. 15). Reason & Bradbury (2001) describe PAR as a "democratic process concerned with developing practical knowing in the pursuit of worthwhile human purposes…" (p. 1). Participatory action research is a key vehicle for involving communities in the process of self-inquiry aimed both at learning about issues/opportunities and developing the strategies to address them (Schall et al. 2004). Within a PAR framework, community members and researchers work together to decide how the research will be conducted, how the data will be analyzed, and how and with whom the results will be shared. This collective and collaborative approach strives to ensure that the inquiry process is transparent and accessible to community members. As well, the participatory nature of action research creates opportunities for mutual and shared learning between the researcher and the community by involving members of the community as researchers (Frisby et al., 2005). Furthermore, as a form of democratized, action-oriented inquiry, PAR helps give voice to community members, ensuring that they are involved in decisions emanating from the research that affect them (Stringer 1999; Wadsworth 1997; Fals-Borda & Rahman 1991; Whyte 1991).

Guyette (1983) suggests that participatory or community-based research strengthens Indigenous people's opportunities for self-determination, a goal consistent with the Yekooche's

desire for self-governance. As well, the participatory nature of the research respects the Foundational Principles for Aboriginal Learning and Education articulated in Battiste's (2005) *State of Aboriginal Learning* report. These principles are reproduced in Appendix A. The PAR approach recognizes the important role that Indigenous peoples should play in data collection (United Nations Economic and Social Council, 2006) and is advocated as an appropriate framework to use when doing research with Aboriginal communities (Canadian Council of Learning, 2007). Finally, a participatory action research approach was intended to build on the collaborative efforts already established between the Yekooche Nation and Royal Roads University to assess the community's technological capacity and potential for information and communications technologies development (Drummond, 2006).

The establishment of the Learning Centre for the Yekooche Nation created a positive opportunity for the community members to learn new skills and enhance their existing capabilities. Unfortunately, the Canadian Council on Learning (2007) contends that "most research on Aboriginal learning is oriented toward the educational deficits of Aboriginal people, overlooks positive learning outcomes, and does not account for the unique political, social, and economic realities of First Nations, Inuit, and Métis" (p. 2). Thus, it was important that the specific participatory action research model used in the study supported a sense of optimism and growth for the community. The focus was on documenting and sharing what could be learned from the positive experiences associated with developing and implementing a technology-enhanced, community learning approach. As a result, Appreciative Inquiry (AI) was used as both a philosophical orientation and a practical framework for the research. This study drew on AI's success in facilitating community development in other Indigenous communities, including Manitoba's Skowman First Nation (International Institute for Sustainable Development, 2001) and the Lockhart River Aboriginal community (Hagan, 2005) in Queensland, Australia.

According to Reed (2007), Appreciative Inquiry focuses on a systematic process of "exploring ideas that people have about what is valuable in what they do and then tries to work out ways in which this can be built on – the emphasis is firmly on appreciating the activities and responses of people, rather than concentrating on their problems" (p. 2). In adapting AI to the current project, the inquiry focused on the process of exploring, documenting, analyzing, interpreting, and sharing what has worked in cluster-based learning within the Yekooche

community. The intent was to share these insights with audiences, both internal and external to the community, in the hopes of influencing the development of both current and future practices associated with technology-enhanced, community-based learning.

AI builds upon the underlying principle that success breeds success. By identifying what has worked successfully in a specific community setting, members will be in a better position to develop and realize visions of new possibilities through a process of shared dialogue and collective action (Hagan, 2005). AI eschews a problem-solving focus that tends to support deficit thinking about community difficulties such as stress, addiction, and alienation. It focuses more on the positive and the potential (Hammond, 1996). Although this approach does recognize that problems do exist; it asserts that change is more likely to occur in a meaningful and sustainable way when people have an opportunity to focus on the positive aspects of the change (Cooperrider & Whitney, 1999). In their account of implementing AI projects to enhance sustainable development in rural India, Ashford & Patkar (2001) describe AI as being based on

> a belief that that in every system, organization or individual, something works. It is important to focus on what works as it influences the way in which people perceive themselves. When a group questions a long held assumption and realizes that it may not be true, they understand that they have power over their own future. Other assumptions begin to be challenged, and images of the future emerge that previously seemed impossible (p. 43).

Reed (2007) explains that focusing on the positive in AI provides an opportunity to engage people more substantially in change efforts because "people naturally turn toward ideas and images that provide nourishment and energy" (p. 27). In addition, Cooperrider & Whitney (1999) suggest that one of the unintended consequences of a problem-oriented model is that people tend to become dependent on outsiders to resolve their issues and can, therefore, become disempowered or feel disengaged. The AI approach, on the other hand, is designed to help create a sense of self-confidence that builds on strengths and achievements in the local community. As Hagan (2005) states:

> . . . by focusing on the positive parts of their past, people have more confidence and comfort to create a better future. Using an appreciative approach touches something important and positive in people and they respond with heartfelt answers rather than the politically correct ones (p.13).

Furthermore, in their studies of social change leadership, Schall et al. (2004) indicate that AI served a highly complementary role to the participative orientation of their research and that it helped address some significant challenges associated with PAR by helping to build trust with participants and by making the research process less threatening to them.

Reed (2007) describes a core set of assumptions that help to clarify the process of developing and engaging in AI-based research. These assumptions are meaningful to the current study because collectively they describe an approach to systematic inquiry consistent with the participatory action research methodology introduced earlier.

Table 2: Assumptions of Appreciative Inquiry (Reed, 2007)
In every society, organization, or group, something works.
What we focus on becomes our reality.
Reality is created in the moment, and there are multiple realities.
The act of asking questions of an organization or group influences the group in some way.
People have more confidence and comfort to journey to the future (the unknown) when they carry forward parts of the past.
It is important to value differences.
The language we use creates our reality.

In conducting the study, the research was divided into four phases consistent with the 4-D Appreciative Inquiry Cycle (Cooperrider & Whitney, 1999; Reed, 2007). These four phases are summarized in Figure 1. Specific research questions were developed that aligned with the overall purposes of the project and that, also, specifically reflected the separate foci of these four phases.

Figure 1: The 4-D Appreciative Inquiry Cycle
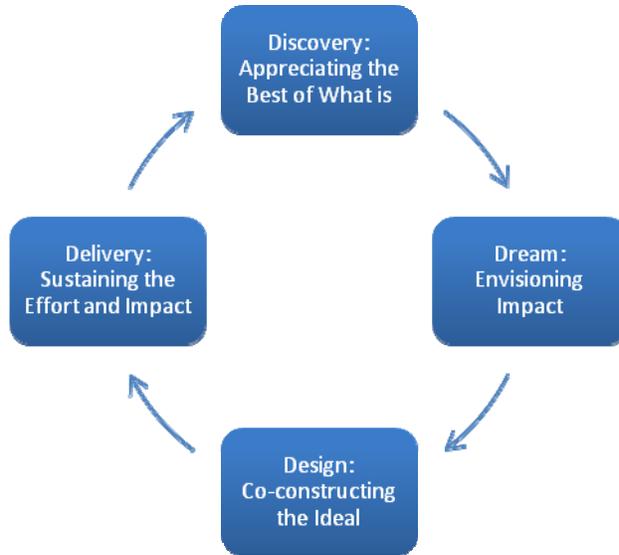
The key research questions addressed in each phase are presented in Table 3.

Table 3: Phases of the Appreciative Inquiry Model

Cycle	Learning Centre Focus

Discovery
"To appreciate what is"
	▪ *Determine how the YLC supports positive developments in the community:*
	
	  ▪ *What have been the positive impacts of the Learning Centre?*
	  ▪ *How has cluster-based learning been used effectively to contribute to the Yekooche community?*

Dream *"To imagine what might be".*	▪ Determine how the YLC can help fulfil the community's hopes and dreams: ▪ *What hopes and dreams are there for the Learning Centre in the community?*

Design
 	
"To determine what should be".
	▪ Collaboratively plan and design success plans for the YLC:
	
	    ▪ *What other kinds of strategies should be implemented to support and sustain the use of the Yekooche Learning Centre and the cluster-based learning model?*
	    ▪ *How can these strategies be implemented and sustained in a culturally-relevant and inclusive manner?*

Delivery *"To create what will be".*	▪ Collaboratively develop strategies to realize the hopes and dreams. Share strategies with other community members to broaden base of support and to seek their input: ▪ *What resources and skills are required to access learning opportunities in preparation for assuming self-governance in a post-treaty environment?*

The first phase of the AI research approach, *Discovery*, focused on determining and describing, through conversations, stories, interviews, and archival materials provided by Yekooche Learning Centre participants and other community members, what was positive about the Learning Centre within the Yekooche community. According to Reed (2007), beginning with positive perspectives engages people more substantially in community development processes and provides a more energizing way to capture interest and create sustainable change. The stories and perspectives were intended to help initiate a focus on what Cooperrider et al. (2003, p. 30) have referred to as the "positive core" – the strengths, goals, and achievements that give life to the initiative that is central to the inquiry. In this study, it was an opportunity for members

of the Yekooche community to tell their stories about the Yekooche Learning Centre – What happens there? Why is it important? Why is it valued? How have people benefitted from the centre? These stories were intended to serve as a "living chronicle" that documented the underlying value of the learning centre and its place in the community. Having these stories told from the perspective of the community members was expected to make the overall evaluation process more meaningful, authentic, and consistent with the ways in which the project had been facilitated and supported over the last 18 months. The stories were intended to be useful to the community, the Band Council, funding agencies as well as for the community's purposes in chronicling the positive learning experiences that have occurred.

The second phase, *Dream,* focused on developing and documenting a vision of what the future might be for the Yekooche community, as it moved closer towards self-governance. It was intended to be forward-looking and expansive as it built on the positive ideas generated in the Discovery phase. This stage of the inquiry involved envisioning "what might be" by determining community members' hopes and dreams for the Yekooche Learning Centre. A key activity in this phase was the creation of a vision of the Yekooche Learning Centre at an Evaluation Framework meeting attended by members of the Band Council as well as some of the participants from the Learning Centre. This visioning activity focused on imagining the Learning Centre five years into the future and how it had impacted the community.

The third phase, *Design*, focused on developing strategies for enhancing and sustaining the viability of the Learning Centre within the community. These strategies were informed by the documentation of how learning occurred in the Yekooche Learning Centre, the kinds of projects that were supported, and the nature of the various spin-off initiatives that had been implemented as a result of the presence and success of the Yekooche Learning Centre. These strategies were informed through interviews and documents gathered from the project coordinator, the Chief and Council, and the Learning Centre participants.

Finally, the fourth phase, *Delivery,* documented efforts made on behalf of the community to put into place initiatives, activities, and plans to help realize the aspirations for the Yekooche Learning Centre. These efforts included the development of a community-specific evaluation model that would enable community members to gather further stories about the experiences of

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Yekooche Learning Centre participants and to determine creative and compelling ways to share these stories within the community and beyond.

Data Collection

A case study methodology was used to focus the inquiry on the Learning Centre in the Yekooche community as opposed to conducting a comparative study with the implementation of similar technology-based initiatives in other First Nation communities. The case study is well established as a qualitative research method in the social sciences (Bromley, 1977). Reed (2007) suggests that case study methodology is particularly appropriate for documenting the processes and outcomes of an Appreciative Inquiry project. She cites Yin's (2004, p.13) description of a case study as a form of systematic inquiry that "investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomenon and context are not clearly evident." Stake (1998) recognizes there is considerable research that subscribes to Yin's definition of a case study that does not overtly use this term to describe it. On the other hand, other researchers have consciously described their research as being a case study to focus on what can be learned from the single 'case' rather to emphasize the generalizability of the results. Given the research goals of the study, the importance of the Learning Centre's context within the Yekooche community, and the need to limit inappropriate generalizations from the results, the case study was considered to be the most appropriate approach to document and describe the Learning Centre experience to date in the Yekooche community.

Reed (2007) cautions that AI research involving a case study methodology requires a definition of the parameters of the "case" in light of the research goals of the study and to provide direction for data collection activities. This boundedness is an important factor in understanding the context and relationships within the case (Stake, 1998). Thus, in the present study, the case is defined as the development and implementation of cluster-based learning in the Learning Centre within the Yekooche Community at Stuart Lake.

Both Yin (1984) and Stake (1995) argue that the use of multiple data gathering strategies enhances the richness of the case analysis and increases the credibility of the reporting. Multiple data gathering strategies were used in the Yekooche study to provide triangulated data sources and interpretations as well as to help reveal multiple perspectives towards the Learning Centre.

Reed (2007) notes that AI research, in order to remain responsive to the dynamics within the research setting, tends to avoid a rigid methodological and procedural design. Like an ethnographic approach, the current study relied heavily on a constellation of data gathering approaches that collectively can be referred to as "fieldwork" – the process of using interview, observation, document analysis, and other data collection methods to understand the dynamics within the case (Robson, 2002). The open-ended, collaborative research design supported by fieldwork was used to help give participants "scope to respond in ways they feel are useful, rather than the ways the researchers have predetermined" (Reed, 2007, p. 128).

Appreciative interviews served as a key data gathering strategy particularly in the *Discovery* stage. According to Cooperrider, Whitney & Stavros (2003), appreciative interviews are conversational in tone and format and that focus on positive and affirmative perspectives related to the topic being explored, Michael (2005) discovered in her study of 60 non-governmental organizations in three African countries that appreciative interviews facilitated storytelling because participants spoke openly and with little defensiveness. Two types of interviews were conducted: key informant interviews and peer interviews. Key informant interviews involve participants who have specialized knowledge, skills, or expertise associated with the issue under study (Goetz & LeCompte, 1984; Spradley, 1979). In this study, the project coordinator and the Band Chief served as key informants. The key informant interviews were open-ended and semi-structured and focused on the informant's perspectives towards and experiences with the Learning Centre. A second type of interview, the peer interview, was design to support the participatory nature of the project. One member of the Yekooche community who was an active participant in the Learning Centre was trained to conduct the interviews with her fellow Learning Centre attendees. A report on the use of Appreciative Inquiry as a means of helping the Skowman First Nation determine land-use and resource management strategies discovered that when community members conduct appreciative interviews, the project had more impact (International Institute for Sustainable Development, 2001). A brief interview guide was created to help steer the data collection process. The interview responses were either video-taped, audio-taped, or notes were taken on paper relevant to the specific questions in the guide to facilitate the capturing of key perspectives as well as the subsequent data analysis. This was an important strategy employed by Strickland (1999) to ensure that tribal members were actively

engaged in the research process. The interview guides used for both of these types of interviews are provided in Appendix B.

Another data gathering strategy used in the study is referred to as the "AI conversation" (Reed, 2007, p. 125). The AI conversation is a face-to-face type of informal interview which focuses more on the interactive exchange of perspectives about what has worked well. In the present study, it took the form of informal discussions with the Yekooche Learning Centre participants, the current and former Band Chiefs, and the Yekooche Learning Centre project coordinator. The goal was to complement the more formalized interview format with an informal means of enabling community members to share their perspectives about the Learning Centre experience in a way that was less intrusive.

As well, an informally-conducted small group interview was used in the *Discovery* phase to help determine appreciative aspects of the participants' experiences towards the Learning Centre. This approach, a variation of a focus group technique, was used because it enabled the sharing of recollections, experiences, perspectives, and feelings in a group-based environment (Morgan, 1996; Krueger, 1994; and Asbury, 1995). As well, Sillitoe, Dixon & Barr (2005) suggest the focus group discussion method is highly appropriate for situations when it is important to have different perspectives on a topic or when it might be difficult to obtain data from multiple perspectives in another way. This approach is described in more detail in the "Findings" section of this report.

Also, a previously-written account of activities and experiences in the Learning Centre (Drummond, 2008) was an important source of data. This account, documented by the project coordinator, served as a narrative that described the coordinator's and a small group of participants' experiences in engaging in the Learning Centre. It provided an understanding of how the Learning Centre was initially established and how it evolved over time based on the experiences of four individuals -- the Learning Centre project coordinator as well as three participants. In Van Maanen's (1988) typology of ethnographic presentation styles, this account is an example of a 'jointly-told tale" (p. 136) in an effort to "bridge the gap between two meaning systems of equal validity (but not always equal power)" (p. 138). Webster & Mertova (2007) suggest that stories of experience provide researchers with a "rich framework through which they can investigate the ways humans experience the world depicted through their stories"

(p. 1) without compromising the richness, meaningfulness, and complexity of the experience. Also, they indicate that narratives, in the form of stories, can provide powerful insights into the complexities associated with both teaching and learning and, thus, serve as important ways of making meaning from individuals' educational experiences (Clandinin & Connelly, 2004). Furthermore, conversations with Band Council members and other community members confirmed that telling stories was a highly valued activity within the Yekooche community, and thus, the researcher felt that analyzing these stories would be an authentic and meaningful activity in the context of promoting a participative approach to the inquiry.

Another helpful source of information was the use of archival documents. These documents had not been written primarily for the study but contributed significantly to understanding the context of the study, to describing the implementation of the Learning Centre, and to confirming the benefits and impact of the learning process. Reed (2007) suggests that this contextual information is often very important in helping other people make sense and meaning of the activities and experiences of those participants who have been actively engaged with the initiative under study. Mason (1996) concurs by noting that documents can serve a valuable purpose when the data desired are not available in other forms or when the documents are used as companions to data collected by other means such as through observations or interviews. Both of these purposes are relevant to the use of archival documents in the Yekooche study. Archival documents included background reports, other grant proposals and reports, as well as meeting notes and summaries. The documents were reviewed, content analyzed, and coded based on the master set of codes determined in the data analysis process described in the "Data Analysis" section of this report.

An additional type of evidence that was very helpful, and even essential, in the research process was the gathering of a range of products generated by the participants as a result of their engagement in the Learning Centre. These included photographic images, videos, songs, newsletters, and web-based materials that provided insight into the kinds of activities that participants were engaged in at the Learning Centre. Reed (2007) indicates that within the context of AI research, these kinds of products also provide a means of expressing and exploring ideas and feelings associated with the Learning Centre experience. Furthermore, Mason (1996), in the context of qualitative researching, suggests that visual and auditory data are often very

helpful in contextualizing data that comes from other sources such as interviews and observation and, thus, can contribute significantly to the multi-dimensionality of the inquiry. Pink (2007) suggests that photos, videos, and hypermedia are becoming increasingly valued in ethnographic research as way of documenting, explaining, and reporting cultural phenomena and their associated meanings. In this study, these media assets were helpful in understanding and confirming the wide range of activities that took place in the Centre. They were helpful in appreciating the nature of the learning and knowledge exchange activities that were happening in the Learning Centre. The various media assets were subjected to the same data analysis process described in the Data Analysis section that textual data underwent.

A final source of data was a collection of field notes recorded by the researcher consisting of observation-based reflections on the use, implementation, and evaluation of Appreciative Inquiry and participatory action research processes. These notes served as a record of experiences, ideas, personal observations, and reflections germane to the methodology of the study and the evolution of the research process. Spradley (1979) suggests "making an introspective record of field work enables a person to take into account personal biases and feelings to understand their influence on research" (p. 76). Furthermore, Clandinin & Connelly (1998) indicate that field notes serve as an important way of acknowledging and documenting the contextual relationships researchers have with their participants. Thus, these notes became a source of information that enabled systematic reflection on the "fit" of the research approach as well as helpful insight into how to design future studies of this nature. Lofland (1971) suggests that there are three types of field notes: mental, jotted, and full. Mental notes are non-written notes confined to memory in situations when using a notebook would be distracting or intrusive. Jotted notes rely on the recording of key phrases and concepts that are written down to help remember a key thought or description that will be expanded upon later. Full notes are more complete notations written down throughout the course of meetings, events or activities, or completed at a later time based on the mental or jotted notes recorded. All three kinds of notes were used in this study. Mental notes were made during visits to the community when it seemed inappropriate to be writing notes such as during conversations with participants and other members of the community. These mental notes were recorded afterwards during breaks in the day or during the evenings. Jotted notes were made during quiet times after these conversations

to capture key points or observations. Full notes were made in the informal interviews with the Chief as well as meetings with the project coordinator.

Participants

The research principally involved a core group of community members (n=7) who have participated in the Learning Centre's programs and activities since the Learning Centre opened 20 months earlier) and the Learning Centre project coordinator (n=1). Participation in the study was open to all who were engaged in Learning Centre activities and/or individual and community-based projects and who indicated a willingness to participate and provide their consent. Existing and former members of the Band Council (n=4) also provided insight into the place of the Learning Centre in the community via conversations, informal interviews, video records, and other archival documentation.

Researcher Roles

Reed (2007) suggests that in field research contexts, the role and position of researchers as internal or external to the group being researched is an important dimension of AI studies. She observes that the distinction between "insider/actor" and "outsider/observer" in relation to the study's participants can affect how the phenomenon under study is represented or how the study's methodology is enacted. In the Yekooche study, care was taken to ensure that various points of perspective along the continuum of insider – outsider position were addressed in the research design. The primary researcher from Royal Roads University was not involved directly in the day-to-day implementation and support of the Learning Centre, thereby providing an arms-length perspective consistent with an outsider/observer. Reed (2007) discusses the unique perspective of the outside researcher:

> He or she may approach the setting as a "strange" world, and this unfamiliarity may entail a process of learning, which may be complex and lengthy. On the other hand, this "naïveté" may allow the outsider researcher to ask questions and propose views that would not be voiced by someone who was accustomed to the world being studied (p. 83).

A second member of the research team, again a Royal Roads University employee, was intimately engaged in the implementation and support of the Learning Centre. She had spent 50% of her time living within the community over the last 22 months on a two-week inside, two-

week outside cycle. This gave her access to perspectives, dynamics, and insights essential to understanding the happenings within the Learning Centre. Furthermore, as a fully-engaged participant in the study, her perspectives and experiences were vital to appreciating how the Learning Centre evolved over time as well as the benefits and successes achieved. Consequently, she was extensively involved in various levels of immersion in the study – as a key informant, as a research design partner, and as a critical reviewer. Finally, a small group of community members who were active participants in the Learning Centre served as data gatherers in addition to being sources of data themselves. This helped reinforce the participatory and inclusive nature of the study and helped to enhance the opportunities for "insider" perspectives to inform both the data collection and interpretation processes.

Ethics

A request for ethical review was approved by Royal Roads University's Human Subjects Review Board in April, 2008. All participants were informed of the right to withdraw at any time and the specific use of the information was explained during the informed consent process. A copy of the consent form is found in Appendix C. Conversations and interviews were arranged with participants at mutually agreed upon locations and times. Formal requests for permission to use visual records such as photographs and video tapes that were the property of participants or that identified participants were sought and obtained for all of these records included in this study. Stories of personal experience within the Learning Centre were shared with the respective participants before publication and revised based on their feedback.

Policy makers, community leaders, and researchers engaged in Indigenous studies have advocated for the adoption of research approaches involving Aboriginal peoples that are more sensitive to the rights of Indigenous communities and that attempt to redress the imbalance between researchers and community members (Ermine et al., 2004; Weir & Wuttunee, 2004). In particular, Ermine et al. (2004) articulate a number of criteria that should be addressed in the design and conduct of research with the goal of understanding "Indigenous ways of coming to knowledge on many levels; theoretically, cognitively, practically, and spiritually" (p. 13). These criteria include:

- Developing a research orientation that avoids pathologizing or problematizing Indigenous perspectives or issues;
- Involving Aboriginal communities or persons in the design and conduct of the study by using participatory and engaging research processes and methods;
- Ensuring that informed consent is an ongoing process that is negotiated and re-negotiated;
- Providing a voice for various Indigenous perspectives to be heard and acknowledged; and
- Shaping the study to ensure that the results are useful and meaningful to the community that is being researched;

Using the AI approach reflected the desire to respect these rights and, also, was responsive to several national policy frameworks that advocate for an alternative to deficit-based and problem-focused methodologies that involve Indigenous peoples in research studies (Status of Women, Government of Canada, 2006; Ermine et al, 2004). Furthermore, the research was designed to ensure that the results were meaningful to participants by using the four 4-D stages of AI inquiry to focus the inquiry on questions of value to the Yekooche community. These questions were drafted after a series of conversations occurred with Band members in the early stages of establishing the Learning Centre. Furthermore, care was taken to conduct research activities in a respective manner. For instance, conversations and interviews were held when participants were most receptive and the least inconvenienced by outside activities. Furthermore, a variety of data collection methods were used to ensure that various perspectives on the Learning Centre could be represented in the research process. As well, reports of significance to the community related to the project were shared with Band Council members and feedback was invited and incorporated into subsequent drafts of these reports. Finally, several members of the community who were actively involved in the Learning Centre participated as data gatherers in the research. One member in particular was hired to serve as internal chronicler of participants' stories so that other community members could learn about the experiences of those involved in the Learning Centre.

Data Analysis Process

All data gathered in this qualitative research process via interview transcripts, notes on conversations, archival documents, media assets, and notes generated from collaborative group activities were subjected to a thematic analysis of their content by the researcher. Then, these analyses were compared and re-examined until a common set of overarching themes had been determined. These themes were used to code data from the transcripts and other sources using an inductive analytical approach described by Huberman & Miles (1994) and Mason (1996) and which is subsequently described below.

The analysis process began with the conversion of all of the data gathered, including the visual and auditory material, into an electronic form. The text files were imported into the qualitative data analysis program *HyperResearch* to facilitate categorical coding and cross-sectional indexing. Once imported, all files were read once to give the researcher a holistic, or as Mason (1996, p. 112) suggests, a more "measured" perspective on the complete data set. A second reading was conducted to generate the initial coding categories. A third review enabled the researcher to revise the coding categories based on a deeper level of familiarity with the data. After the third review, the coding categories were documented on paper and preliminary relationships between the categories were explored. Some coding categories were revised based on this exploration. Analytical notes were kept as annotations to the coding categories in *HyperResearch*. These analytical notes or "memos", as suggested by Corbin & Strauss (1990), included phrases that described each of the particular coding categories. Next, the names of the coding categories were entered into the *HyperResearch* program and applied to the appropriate text and image segments. A list of the coding categories in provided in Appendix D..

Once the applications of the codes was complete, each coding category was retrieved and the coded segments were reviewed to determine if the code label and its related analytical notations provided a best-fit analysis or explanation. Using *HyperResearch* proved to be advantageous for this process because it permitted all coded segments to be reviewed in the context of their original data sources as well as enabling a review of all discrete segments associated with a particular coding category. This best-fit analysis also involved moving back and forth from the research questions to the segmented codes to ensure that the categorizing process was appropriate and meaningful. Where the fit was determined to be suspect, alternative

labels were considered and, in two cases, specifically applied. The best-fit review also enabled decisions to be made on whether any of the coding categories needed to be combined with others or further subdivided.

At this point, a visual concept map featuring the various category codes was prepared on paper and connecting lines were drawn to represent possible relationships. This enabled the exploration of different relationships that are often challenging to see when reviewing text and coded segments (Mason, 1996; Huberman & Miles, 1994). Boolean searches based on various combinations of category codes were then performed to explore whether any of these relationships were meaningful. For instance, the code "teaching—creating a welcoming space" was combined with the code "learning—building on meaningful experiences" to explore how setting up the learning centre to be an inviting environment for participants potentially helped to set up the appropriate conditions for supporting learning or potentially led to unanticipated consequences. Sillitoe, Dixon, & Barr (2005, p.227) refer to this process as "querying" the database of coded data to test the researcher's emerging understanding and theories about the phenomenon being studied. By working iteratively back and forth between the searches and the underlying coding structure, the researcher is able to test fit working hypotheses and apply rival explanations to the data. The Boolean searches and the subsequent review of the retrieved data led to a clustering process in which different coding categories were grouped by common themes. These themes became the basis for the findings described in the next section.

Findings

The findings associated with the data collection and analyses are described separately for each of the four phases of the AI model below. The results are described as themes and key points anchored to each of the questions presented in Table 3.

The Discovery Phase

What has been the positive impact of the Learning Centre?

A review of many of the participants' projects that had been created since the opening of the Learning Centre revealed not only a diversity of interests but also a wide range of "products" including video documentaries, music CDs, electronic photo albums, community newsletters, project proposals, instruction sheets, transcriptions of Elders' stories, and other documents. With respect to these products and projects, a small group participatory interview was held with five members of the Learning Centre during a retreat in Victoria, 14 months after the Learning Centre was opened. This retreat was part of a field trip for the participants to meet with various Aboriginal leaders, artists, and business owners as well as to engage in cultural activities that might be inspiring and spark ideas on potential projects in the Yekooche Learning Centre. As well, this retreat gave participants an opportunity to experience some reflective time outside of the community to consider the benefits to date of the Learning Centre and to think about its future potential. The objective of the small group participatory interview was to help participants identify the positive aspects of being engaged in the Learning Centre – an activity that is central to the *Discovery* phase of the Appreciative Inquiry process and a key stage in the data gathering process that provided insight into the participants' experiences within the Learning Centre. Instead of asking questions to generate verbal responses immediately, the research team felt that the participants would find it easier to express their perspectives on paper first. Thus, the research team began the session by asking each participant to individually reflect on the positive benefits of the Learning Centre and to capture these on a piece of flipchart paper in words or pictures. Once the participants had completed their flipchart reflections, they were asked to share what they had recorded. After the participants had shared the highlights from the flipchart drawings, the research team recorded the common elements and then asked the participants if they had been captured correctly. Table 4 provides the list of the positive aspects that had been shared by all or most of the participants.

Table 4: Positive Benefits of the Learning Centre

Improved communications
Learning new skills
Central gathering place
Connect to other people and knowledge outside community
Stay in community and continue to learn

In discussing these points, participants indicated that the Yekooche Learning Centre has had a positive effect on communications in the community, noting that people talk more to each other because they see each other in the Centre "all the time" and that there is now a semi-regular community newsletter that is produced which keeps people better informed about community activities and events. Participants also mentioned that the Learning Centre had helped them learn new skills like typing, searching for and accessing information, locating and recording music, using videos and images to tell stories, and also helped them refine existing skills like writing and spelling. As well, participants mentioned that the Learning Centre had become a central hub – a place for people to get together from various parts of the community. Several participants mentioned the value of being able to access information on the Web on a need-to-know basis as well as the value of connecting to other people outside of the community such as relatives, people in other First Nations communities, as well as others who had similar interests. Finally, many participants reflected on the value of being able to stay in the community and continuing to learn as opposed to having to leave the community to take classes for gaining high school proficiency or taking a certificate program.

Many of the points identified by the small group of participants were confirmed in subsequent discussions with the Chief regarding the positive role of the Learning Centre. He has observed that many youths and other community members are indeed learning valuable life skills and community-based skills, like those described by the participants above, by exploring the projects that interested them in the Learning Centre. These skills included: collaborating together on community projects which had happened very infrequently prior to the establishment of the Learning Centre; mentoring and assisting other participants not as familiar or proficient with some of the technology tools available; interacting with Elders to help them share their stories with the help of computer technology; using video technology available in the Learning Centre

to capture key events and activities of importance to the community; setting and achieving project-based outcomes as well as progressive educational goals; proposal writing and project planning; and developing the administrative and technical skills necessary to support the operation of the Learning Centre. As well, he noted that young adults in the community were engaged in and committed to significantly more projects that were focused on understanding community heritage or focused on community development and improvement as a result of their participation in the Learning Centre. A list of the collaborative projects that were in development as a result of participation in the Learning Centre is found in Appendix E. As well, he noted that the Learning Centre has been a success because there are so many people in the community who "now go there regularly".

This observation is corroborated by the attendance figures taken on a regular basis in the Learning Centre. In the first few months of operation, the Learning Centre was visited on average by five participants a day. At present, the average number of community members attending is 15-20 with occasional peak periods when attendance increases to 30 learners. Furthermore, increased access to learning technologies enabled community members to engage in more formalized online learning opportunities. Six months after the Learning Centre was opened, participants began to sign up for the EBUS Academy which offers online educational programs from Kindergarten to Grade 12 in partnership with the Vanderhoof School District. With the assistance of qualified instructors, the EBUS program provides courses that can be accessed through the use of both asynchronous and synchronous technologies and provides a more flexible, individualized, and accessible way for children and young adults to continue their formal educational studies beyond what is already offered in the community. Since the program began in October, 2007, more than 20 members of the community have taken programs or courses through the EBUS Academy.

As well, the Chief noted that there also seemed to be more interest among many community members in achieving community-wide goals as a result of participation in the Learning Centre. Having computers at Yekooche Learning Centre instead of having them in individual homes has encouraged people to socialize and interact together – providing a common space for people to explore their interests, learn from each other, and work on some common projects. The Learning Centre has become a common space for doing this in the community "that

isn't institutionalized like the school". Consequently, he has observed that there is less animosity in the community – that the "community is starting to come together in unity." He mentioned that there have been a number of things over last 20 years that have affected the community negatively – drugs and alcohol addictions, opening of the forestry road that has increased access to drugs and alcohol, inter-family conflicts – but as a result of the Learning Centre, there has recently been more collaboration happening on community-wide projects.

These points were also supported in the interviews with the project coordinator. Over the course of the three interviews, she discussed the positive benefits of the Learning Centre in terms of key milestones that had happened as the use of the Learning Centre evolved over time. These milestones included shifting her teaching approach to being less directive and focusing more on mentoring and coaching, questioning her own assumptions about how learning happens, using participants' interests as a focal point for engagement and participation, and providing additional resources and mentoring once participants showed an interest in learning more. These milestones have been described in a series of stories described in the case study report prepared by Drummond (2008).

Furthermore, the project coordinator indicated that wide-spread participation at the Learning Centre led to a substantive increase in applications and course completions from community members for other training programs such as First Aid, Small Engine Repair, Food Safe, Fire Fighting and Management, Heavy Equipment Operation, Worker Safety, and Water Management (Drummond, 2009).

As well, the project coordinator remarked on how the Learning Centre had started to draw people from across the community to come and explore what could be achieved with the available technology and, at the same time, it provided a "gathering place" that had been missing from the community previously. This observation was echoed in the comments provided by Yekooche participants who attended an "Evaluation Framework" meeting held in Prince George in December 2008. The meeting brought together representatives from the Yekooche and Lheidli bands to discuss how they can work with representatives from the BC Ministry of Aboriginal Relations and Reconciliation, as well as Royal Roads University and the College of New Caledonia, to develop a participatory approach to evaluating the successes emerging from similar but separate "capacity projects" in each community. Sillitoe, Dixon, & Barr (2005) indicate that

this kind of meeting can be very helpful to groups that are interested in bringing out change in their own communities. This evaluation process was an important outgrowth of the Yekooche experience of getting the Learning Centre established and successfully operating. It became apparent that there was tremendous interest in learning about what had worked in developing the Learning Centre, why it was successful, and what future steps could be taken to continue to foster the successes and grow the impact. The Yekooche participants commented at this meeting that until the Learning Centre was created, "there used to be no place to gather"; "We were chased out of the school"; "Now it is a place where people are constantly dropping in . . . everybody, family and friends, kids and Elder."; and now, "we have a place where people will come together."

As well, the project coordinator recalled that the Learning Centre had also become a focal point of interest for others beyond the community such as representatives from various government agencies and other organizations. The desire to share the positive impact of the Centre gave her an opportunity to encourage a number of participants to share their experiences and to demonstrate how they were using the technology in presentations within the community, at conferences, and with other interested groups and organizations such as representatives from the BC Ministry of Aboriginal Relations, and Reconciliation, Royal Roads University, and the First Nations Technology Steering Committee.

It is evident from the perspectives shared by the participants taking part in this study, the Chief and Council, and the project coordinator as well as observations made in community meetings that the Learning Centre had emerged as a very important and central place within the Yekooche community and that it had a number of significantly positive benefits for community members such as its role in encouraging skill development, the development of individual and community projects, increased access to other outside resources for cultural development and ongoing learning, the formation of a community gathering place, and the opportunity to showcase experiences and impact with outside organizations. The second part of the *Discovery* phase of the AI process involved determining the specific aspects of the cluster-based learning approach that helped to foster this impact.

How has cluster-based learning been used effectively to contribute to the Yekooche community?

The various and diverse sources of data accessed in this study have helped in the identification of an emergent and evolving instructional approach that was quite different than what had been planned when the Learning Centre had been first established.

The original cluster-based learning model assumed that a good deal of the learning taking place in the Centre right from the beginning would be project-based and that participants would work together to identify common community needs that could be addressed. Nevertheless, according to the interviews with the project coordinator, efforts that were intended to introduce the model in a formalized way as originally envisioned failed. Like a lot of the teaching strategies that were tried, the project coordinator needed to re-frame the approach by looking for common individual interests and letting the project-based learning emerge and unfold in a less-forced manner. This enabled individuals to form natural project groups once it was evident that their interests were intersecting or that there was an overlap. Often, as the project coordinator related, one person would become interested in a project that others thought was "cool" and then others would start asking questions about it and want to know more about what they could do to help out or to be involved. She explained that this modified cluster-based learning process "naturally emerged" and "took root" among groups of participants as they started to mentor each other and share skills.

The teaching and learning approach that was found to support cluster-based learning effectively was referred to by the project coordinator in interviews and in her case study (Drummond, 2008) as "de-institutionalized learning." This approach has, at its core, a focus on the "interests and priorities of the community" and involves teaching and learning strategies that are "collaborative, flexible, respectful, and reciprocal." The experiences of opening and supporting the Learning Centre have resulted in five core characteristics that jigsaw together to define this approach. These characteristics are briefly described next in relation to how they contribute to an understanding of the cluster-based learning approach that actually unfolded within in the Learning Centre.[7]

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[7] These attributes are described in more detail in the current research conducted by Drummond (2009) that examines the specific role of technology in supporting the Learning Centre.

Using E-Learning to Build Governance Capacity in the Yekooche First Nation

1. Creating a Welcoming Environment. The Project Coordinator indicated that a welcoming environment was established right at the beginning as a function of the Centre's central location in the community. Ensuring that the Centre was viewed as a welcoming space also meant getting potential participants involved from the beginning. The project coordinator described how it was important to set this tone right from the time the Centre was opened. Once the Centre was well established and was being heavily used, the project coordinator indicated that it was important to ensure that it continued to being seen as a welcoming place even for other members of the community such as the Elders who were curious but not necessarily the principal users. The Chief also noted the importance of the Elders' relationship to the Learning Centre in his interview.

In the interviews, the project coordinator mentioned her frustration during the first few months in trying to find ways to encourage attendance and to motivate people to continue to participate in the Centre's activities. Fewer people were actively engaging in the Centre's activities and opportunities than originally expected. She indicated that she was not prepared for the apparent lack of interest in any of the teaching strategies she was using. However, the project coordinator began to realize that a change in approach was necessary to encourage relevance, purposefulness, and sustained interest. The next section describes how she began to shift her teaching approach to respond to the original lack of demonstrated interest in the Learning Centre.

2. Being Patient, Observing First. The project coordinator readily admitted in her interviews that being confronted with a significantly underused learning space was very difficult for her and she began to question whether the Centre was going to work. Recognizing her limited experience in developing this kind of centre, she sought the advice of the Chief and Council and was advised "to be patient and continue to do what she was doing" and that "the community only needed time to accept the Centre's presence." With a more patient approach, she started to observe the ways in which the younger, school-aged children were interacting with the technology, some of them as young as five years old. She was inspired by how they used the technology. Often, she observed that they would show no fear or hesitation and displayed a significant willingness to "try new things." These observations of the younger children helped her to adjust her style in working with youth and adults who dropped by the Learning Centre. She indicated that she stopped trying to get the students to develop learning plans and establish

learning goals and, instead, started "watching and listening." She found that by being patient and focusing on observing first, she was in a better position to support participants' learning needs.

She indicated that she was learning to stop doing what had always worked in her past experiences, such as developing a sequential systematic, goal-driven approach to teaching. She explained that she needed to let go of her impatience in waiting for participants' interests to grow. This patience demanded that she "watched, listened, and adapted to the flow" of the Learning Centre depending on what people attended to and their interests at the time.

Later in the development of the Learning Centre, the project coordinator started noticing that her approach to being patient and observing first was similar to the ways in which the Elders were interacting with younger members of the community in the Centre. She had observed that the Elders were beginning to visit the Centre and take notice of the kinds of activities that were happening in the Learning Centre such as the preparation of newsletters, the writing of stories, the development of artistic videos, and the creation of new forms of music. The Chief was noticing this as well. He indicated that the Elders were starting to drop by and watch and interact with the younger members of the community. From the project coordinator's comments in the interviews, it was obvious that their presence had a profound effect on what was happening in the Learning Centre as well as on her own style of interacting.

Once she had adjusted her approach, the project coordinator noticed that the "atmosphere" in the Learning Centre began to change and that attendance increased from five participants "on a good day" to 15-20, and sometimes up to 30 participants – all in a space that originally accommodated six computers. The new challenge was "how to put the 'learning' back into the Learning Centre." This involved questioning her own approach to teaching as well as her own understanding of how learning occurs.

3. Letting Go of One's Own Assumptions about Learning. During this process of trying to determine how to encourage actual learning in the Centre, the project coordinator recalled that the conversation with the Chief and Council had been very valuable in helping her to relax and think about how to approach the teaching process differently. She discovered that she needed to watch and listen to the participants as they explored working with the technology in the lab. She realized that by doing so, the participants "would show her what she needed to do." She just

needed to be receptive and let go of "what it is you think you're supposed to be doing and be receptive to what is that they are seeking and needing and wanting from you." A key part of being able to "let go" was being willing to re-examine the nature of the teacher-learner relationship to take advantage of the opportunities to have her views, actions, and approaches shaped by the participants. She observed that this process involved re-framing "who was the teacher and who was the learner." In her case study of the development of the Learning Centre, the project coordinator refers a number of times to the importance of this reciprocal learning process, not only in terms of the opportunity to learn from the youths but also in terms of it serving as the basis for building a strong, respectful, and trusting relationship with the participants and other members of the community (Drummond, 2008). She also acknowledged that reciprocity created opportunities for both the teacher and learner to change their approaches to the learning opportunity. Participants were starting to take more risks in exploring what the technology could do and how they could benefit from using it.

Furthermore, "letting go" also meant checking assumptions about how to engage participants in cluster-based learning. The original assumption that cluster-based learning could be used at the beginning of the technology-enhanced learning process did not fully account for the critical role that individual relevance played in supporting participant success in the learning process. She indicated that it was difficult if not impossible to get five people interested in the same thing at the same time. She felt that the five-person-per-cluster model was a good concept but not "practically possible." Thus, instead of encouraging participants to join groups that had fixed numbers and pre-selected topics, she had to draw on her patience and her observation skills and "let the clusters form naturally." She observed that the process would begin with an individual's own interests and then "he or she would begin mentoring others" and then a cluster of shared interests would form and would last "as long as their interest was there."For instance, one community member's explorations in integrating music and videos into creating new songs eventually led to a cluster of young adults working together in this process, teaching each other new techniques and skills, while at the same time, being coached to try new approaches by the project coordinator.

The following quote from an interview with the project coordinator effectively summarizes how the cluster-based learning materialized:

> Once we kind of let go of our different ideals around how this learning was going to happen and started focusing on individuals and their interest and what they wanted to do, it actually started happening naturally. So you would have someone who would step up and start working on a project that everybody else thought was really cool and wanted to know what they were doing and asking questions about it.

   4. Engaging Curiosity. The project coordinator indicated in her interviews that this re-framing of cluster-based learning helped to enhance the opportunities for participants to benefit from her skills and expertise and enabled her to focus her efforts on observing, exploring, understanding, and encouraging the curiosities of the Centre's participants. She needed to give the participants the space to explore how to use technologies such as audio and video production and internet searching while at the same time, helping them see the relevance of their explorations in order to keep them fully engaged. This became a trial and error process as she experimented with strategies for encouraging the interest and motivation of many of her participants.

   Furthermore when trying different approaches, she soon discovered that any time she reverted back to a more established, formalized style of teaching, she had less success in guiding the learning process forward. She reinforced that, from her experience in the lab, it was important that the engagement of curiosity happen on an individual level first so that the participants are "building a relationship with you" and more importantly, a "relationship with themselves." Thus, it became evident to the project coordinator that, in encouraging cluster-based learning, finding topics and interests that were meaningful to participants went hand-in-hand with the engagement of curiosity. From her comments in the interviews, the project coordinator believed, based on her experience with more than 30 learners at the Centre, that the learning process was more successful when more immediate and tangible benefits could be realized among participants. On the other hand, when these benefits were less tangible and seemed more removed and distant from the immediate learning situation, participants showed less interest and less commitment.

   Consequently, it was important, as indicated in the next section, that the project coordinator develop an approach to supporting growth within the learning process that involved a series of relevant, attainable stretch goals that capitalized on learners' growing and evolving interests.

5. Supporting the Next Step. Supporting the next steps also meant helping learners gain more confidence has they continued to explore new ways to use the technology. The project coordinator indicated that it also meant creating or fostering explorative space for participants to discover the limits of their own learning and, then, knowing how to provide the necessary support to help them reach the next goal. This demanded the willingness for the project coordinator and the participants to work together through a process of trial and error which sometimes involved hitting barriers or unexpected pathways. And, sometimes, this also meant the project coordinator could not prepare in advance to provide support strategies for the cluster-based learning that was naturally-emerging. The project coordinator stated "you don't always know what the next step is going to be until the night before." This meant that facilitating and guiding the learning process "in the moment" became much more important to the success of the participants' experiences.

Furthermore, at the heart of the process of supporting the next step was providing encouragement to participants to build confidence that enabled them to take more risks, recognize the growth they were achieving, and engage more openly in supporting the learning of other participants. She explained that she felt that it was really important to help participants see the value in what they wanted to do, what their interests were, and to help them "feel valued about themselves." By building on this confidence, she found participants were beginning to stretch their learning, aspire to do more, and ask more questions about how to do certain tasks and procedures.

As a result, a large number of Learning Centre participants now are actively engaged in shared, cluster-based learning processes associated with specific topics such as making original music, creating video or photo archives of family events, and creating video montages of community events and activities as well as traditional dress and costumes.

In addition, one of the most substantial outgrowths of the cluster-based learning process is the number of spin-off initiatives that have developed in the community. A list of the current initiatives in the community that owe their genesis to the establishment of the Learning Centre is provided in Appendix D. Some of these projects like the First Voices initiative have enabled participants to gain further technological expertise as well as enhanced skills in interviewing and project management while exploring how to document and archive Elders' and other community

members' knowledge of their traditional dialect of the Carrier language. Other initiatives have not directly benefitted from the enhanced technological skills but have been designed to build on the burgeoning and shared interests demonstrated with the Learning Centre on supporting other community-based projects. The main point about these spin-off projects is that they exist, according to the project coordinator and the Chief, as a result of the growth in learning and interest that was happening in the community and, at the same time, led to further opportunities for this learning to expand and be applied to subsequent projects.

In summarizing this section on how cluster-based learning was used effectively in the Yekooche Learning Centre, it is clear that the project-based approach which was successfully implemented had its genesis in the facilitation of participants' ownership over the learning process and was greatly enhanced by a teaching orientation that required observation first, and then a step-by-step process of encouraging participants' interest in specific areas of exploration. Assumptions about how learning was going to occur and who was going to be the "learner" had to be questioned and checked for participants to fully and reciprocally engage. As learners gained more self-assurance, they became more willing to share their interests with other participants, and to provide coaching and mentoring to others who had similar interests. As a result, clusters of participants began to take shape around specific and shared areas of interest. These shared interests formed the basis of a number of projects that are now occurring within the community. The following excerpt from the project coordinator's case study account nicely ties these five key characteristics of the "de-institutionalized" learning model together and indicates how this supported further growth in collaborative, project-based learning:

> Through this supported learning and their own successful completion of small steps, [learners] acquired greater confidence in their abilities and a desire and willingness to share and mentor others with similar interests. As in the initial draw of the young children's enthusiasm, the participants' excitement, commitment, and successes piqued others' curiosity and encouraged them to begin projects of their own. With continued exposure to multiple projects ongoing at any given time, group and community projects began to take shape within families and collaboration between families on projects emerged as well.

This *Discovery* Phase of the AI process was primarily focused on highlighting, from various perspectives, what has worked well in the implementation of the Learning Centre, in

terms of the tangible benefits to participants and the community. Also, this phase provided a deeper appreciation of the positive discoveries associated with the emergence and evolution of a cluster-based learning model that supported collective growth in learning and stimulated meaningful use of the technology. The findings in the next section indicate how these discoveries can help the Yekooche community to imagine a future that builds on these successes in establishing the Learning Centre.

The Dream Phase

What are the hopes and dreams for the Learning Centre in the community?

According to Ashford & Patkar (2001), the objective of the *Dream* stage in Appreciative Inquiry is to "enable participants to evolve quality visions based on their strengths and values" (p. 19). In this stage, people have an opportunity to build on the positive qualities and strengths outlined in the *Discovery* stage. Ashford & Patkar (2001) contend that because images of the community's future are grounded in these past and current successes, they represent tangible and "compelling" possibilities (p. 19). The vision of the Learning Centre portrayed in Figure 2 is a compelling representation of the image of the Learning Centre's future and how this vision relates to the Yekooche community. This vision was created by the group of five Yekooche participants at the Evaluation Framework meeting that was mentioned earlier in the report.

Participants were asked to engage in a visioning activity that asked them to "look five years down the road and describe how their communities now looked as a result of the greater capacity that had been achieved as a result of the Learning Centre." Figure 2 showcases the vision created for the Yekooche community based on the input from the Learning Centre learners who attend along with members of the Band Council.

At the top of the Vision for the Yekooche Nation were the words "Empowerment" and "Respect." At the centre was a big picture of a house, representing the Learning Centre, with the top blowing open like a pizza pop "releasing its goodness." Yellow, red, and orange 'flames' represented this goodness that, in turn, are releasing images of music (notes), an educational graduate (a mortar board), attaining goals and aspirations (a star and rainbow), health (a medicine wheel), support (hands), culture (a fish) and technology (a microphone). The front of the building has a door, labelled 'Opportunity," upon which a 'young' man is knocking. There is a book on the side of the building expressing the importance of the Centre to learning. On the

bottom of the page is the Learning Centre logo which is a Dream Catcher, with the words "Yekooche" written on top and "Learning Centre" written on a computer monitor in the centre of it. Directly below the logo is "Community," flanked on each side by "Elders" and "youths." Framing the image of the house are the words: "Future," "Past," "Present," "Music," and "Culture."

Figure 2:

Vision for the Yekooche Learning Centre

Ashford & Patkar (2001) describe the characteristics of a good vision in the AI process that will inspire people to achieve goals serving the betterment of their community:

> Good visions are challenging, yet achievable. They create tension between what
> the group is currently doing and what it could achieve based on its past

accomplishments and current attributes. They stir the group to action. They are holistic, shared and form the basis for the group's activities (p. 24).

The image created by the Yekooche participants presented a significant vision of how central the Learning Centre is imagined to be in the community in the future, serving a key role in enabling both individual and community-wide aspirations to flourish in a context of respect and empowerment. The hopes and dreams encompassed by this image provide an important anchor point for developing strategies for attaining this vision. This is the focus for the third phase in the Appreciative Inquiry process described in the next section of the report.

The Design Phase

What other kinds of strategies should be implemented to support and sustain the use of the Yekooche Learning Centre and the cluster-based learning model?

The *Design* stage of Appreciative Inquiry focuses on 'determining what should be.' It is a collaborative effort undertaken by group members to prepare for taking action on goals associated with attaining success with a project (Ashford & Patkar, 2001). This study illuminates a number of findings from the data gathered that are important for the Yekooche community and its partners to consider in terms of moving forward with developing future strategies for attaining the vision for the Learning Centre within the community with the support of the cluster-based learning approach that has emerged. The two strategies described below were informed by the data gathered from the project coordinator, the Chief and Council, and the participants themselves.

Build Community Capacity—One Individual at a Time. The interviews with the project coordinator revealed some insightful perspectives on developing community capacity – the enhancement of skills and knowledge that would enrich the community and lead to further development. She has concluded that building this capacity does not happen without hard work expended by the learners and the facilitator to ensure that the learning is personally relevant and meaningful. She commented in one of her interviews that once participants started working on a number of projects that interested others, they "started to discover something about themselves that was valued by other people, valued by the community." With the enjoyment of discovery in their expanding interests and "excited about discovering their own personal capacity," she

noticed that it was at this point many individuals became willing to share their project work with others. Clusters of participants began to grow "organically" as people began to help each other more frequently and their interests began to more readily converge.

Nevertheless, starting with individuals' interests and curiosities also means being mindful of the limits to the community's capacity to support additional projects. For instance, it was clear from the data gathered from participants, the project coordinator, the Chief, and the various meeting notes that there was real excitement about the potential of the many spin-off initiatives from the cluster-based learning that had created further opportunities in the community. In community development and capacity building terms, a substantive number of projects and external relationships had proliferated or begun to be established. This was a significant outcome given that almost all of these initiatives had been started over the last 12 months. It raised a caution brought forward by both the project coordinator and the Chief in terms of stretching available and committed community members really thin as a result of the need to participate and, sometimes manage, the various initiatives. The Yekooche is a small community with limited human resources. Despite the benefits and resources springing forth from these opportunities for growth, each project that is launched demands peoples' time and energy in the community. These observations suggest that there is a capacity threshold that needs to be acknowledged when small communities engage in multiple projects at the same time.

Help Make the Links to Self-Governance. The Chief clearly stated in his interview that he saw real potential for the Learning Centre to contribute to the knowledge building and skills development that would be required in a post-treaty world for the Yekooche. He suggested that it is important for the younger members of the community "to learn the language of treaty" and that this cannot be done by taking a course because these skills are not taught in formalized programs. He believed, based on his observations and interactions within the Learning Centre, that younger members were gaining information literacy skills that would help them seek out and discover resources and ideas that would be valuable in the self-governance process. Thus, members of the community would have to learn these new skills on their own or in groups, not through any existing courses. The Learning Centre would play a major role in supporting these efforts.

When asked in a later interview how she felt these links to self-governance could be best fostered by the Learning Centre, the project coordinator indicated that the participants were already preparing themselves to function successfully in a post-treaty world by engaging in the kinds of cluster-based learning activities that they were involved in presently. Moreover, the youths engaging in the Learning Centre were volunteering to go to treaty meetings and, more recently, one youth had been hired to serve as a liaison between the treaty team and the youth in the community. In her words, "they have people now who want to invest into what's happening in the community."

It was evident from the discussions with both the Chief and the project coordinator that capacity development to support self-governance needs to be based on a variety of individualized learning pathways that could be supported through the Learning Centre. By supporting these pathways, there would be more likelihood that meaningful clusters of shared interest among participants would subsequently develop that engaged more people in working together on community projects. On the surface, there may not appear to be alignment or overlap between the purposes of these individual projects and the priorities for future self-governance connections. Nevertheless, the observations reported here acknowledge that the purposes and priorities do affect one another and form the basis of a meaningful and productive capacity building process.

How can these strategies be implemented and sustained in a culturally-relevant and inclusive manner?

One of the key insights that came out of the interviews with the project coordinator was her realization that over the course of establishing the Learning Centre, she had, without realizing at the time, adapted her teaching style to incorporate many Aboriginal dimensions of learning and teaching instead of having the Learning Centre participants adapt their learning styles to fit a Westernized way of teaching that involves the setting of discrete instructional goals, direct instruction involving the provision of clear steps to solve problems, and highly-sequentialized skill-building.

Furthermore, there was considerable alignment between the participants' perspectives and the observations of the project coordinator reported above. When the five participants attending the group discussion meeting in Victoria were asked "What helps in the learning process?," the following list of reflective suggestions was generated:

- Have patience
- Don't be afraid to make mistakes
- Learn from your mistakes
- Move forward
- Get your voice out --Don't be afraid to be heard
- No drugs
- Accept who you are
- Embrace the knowledge today
- Listen to the stories
- Continue to hold the traditions/Elders close by

These perspectives acknowledged the value the participants placed on respecting the wisdom of the Elders as well as traditional ways of learning that were well-established in the community. The participants' comments were also reflective and supportive of other key characteristics of the emerging approach to cluster-based learning, most notably the importance of sharing ownership, observing and listening first, checking assumptions about learning, engaging curiosity, and supporting the next steps by taking risks and moving forward.

It was evident from the perspectives of the participants as well as the project coordinator that a culturally-relevant and inclusionary approach was enhanced by the opportunities to share ownership of the Learning Centre and for participants to pursue their own interests that eventually led to collaborative learning activities and more collective engagement in projects that focused on preserving important aspects of Yekooche culture such as creating music, capturing Elder's stories, and recreating traditional forms of dress by doing Internet-based research on relevant Aboriginal apparel and clothing styles during various historic periods as well as researching how clothes were traditionally made and decorated.

The Delivery Phase

What resources and skills are required to access learning opportunities in preparation for assuming self-governance in a post-treaty environment?

The last phase, *Delivery*, of the Appreciative Inquiry process focuses on mobilizing resources and developing action plans that move the community forward in attaining their collective vision. Ashford & Patkar (2001) suggest that this stage serves as an opportunity for group members to explore new methods of organizing and carrying out actions that improve their chances of success. As much as possible, they advocate making use of the community's own talents, skills, and knowledge to achieve its vision.

An innovative and meaningful strategy for moving forward that meets Ashford and Patkar's criteria above came out of the Evaluation Framework retreat referenced earlier in the report. The purpose of this process was to develop a framework for enabling members of the Yekooche First Nation to tell their own stories about the impact of capacity projects like the Learning Centre that had been recently implemented. As indicated in the notes from this meeting as well as follow-up conversations with three attendees, the Evaluation Framework needed to be collaboratively-developed based on the needs of each community and free from externally-imposed structures and models. The framework had to recognize the centrality of the participants' and other community member's stories about the vision, role, and impact of the project. The understanding of the impact of the capacity projects would be derived from the ways in which the stories were heard and the meanings taken away from them. The stories had to acknowledge where the communities had started with their capacity building projects and how they had overcome obstacles to have success.
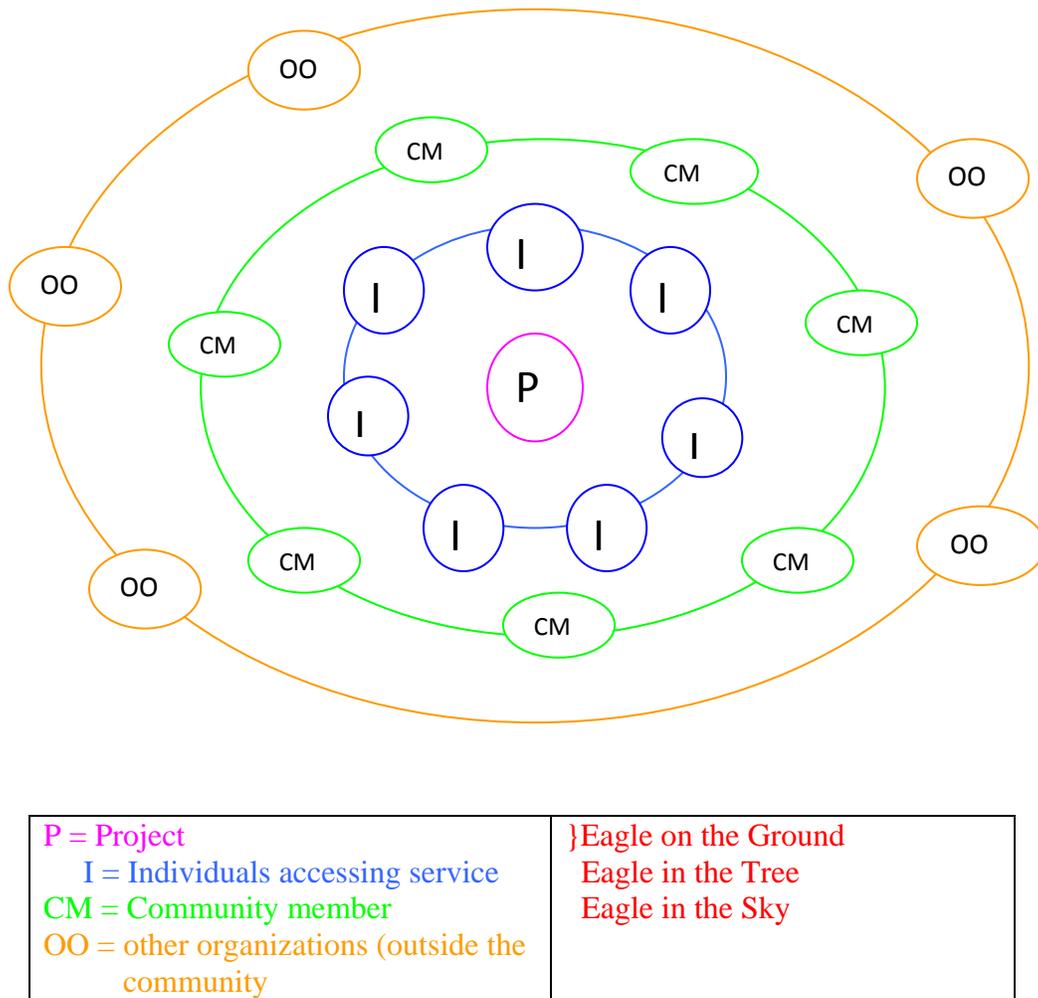
Although initially framed as an evaluation strategy, a review of the meeting notes and the follow-up action plan suggest that this process of sharing stories about the impact was viewed as an important means of helping the community learn from the experiences of people involved with the projects in order to move the projects forward to new levels of significance and success. The model depicted in Figure 3 was generated by the attendees to help guide the communities' efforts to gather and collect stories and served as a framework for articulating an action plan. The model proposed that stories needed to be shared by three groups of people represented by the concentric rings depicted in the figure. The model acknowledges the central role of the people

most affected by the project – the "individuals accessing service." In the case of the Yekooche Learning Centre, this refers to the children, youth, and adults who are engaged in cluster-based learning currently within the Centre or have benefitted from participation in the Centre in the past. At the next level, it is important that the stories of the community members who have either been impacted or not impacted by the cluster-based learning projects also be told and be heard in this process. Finally, attendees also recognized the importance of collecting stories from the myriad of project partners, funders, and interested outsiders so that there is a great understanding of the impact on those individuals and groups who provide support to the community in a variety of different ways.

Members of the community are now engaged in generating the stories from the Yekooche Learning Centre participants as well as determining community-based strategies for gathering further stories in various forms from participants, other community members, as well as representatives from partnering organizations, funding agencies, and people in other communities who have been affected and impacted by the Learning Centre's presence in the Yekooche community. From a review of the evaluation meeting notes, it was evident that the process of gathering further stories and deciding how they were to be shared was a critical next step in the capacity-building process and was viewed much more importantly than only as a process of determining impact. The meeting notes refer to the process as a way of changing perceptions about what is "appropriate" learning and to help others understand the "paradigm shift" in education as well as how leadership growth is defined and achieved. The attendees mentioned that a "big measure of success is in the telling of the story" and that the stories need to be told in creative and non-limiting ways. The meeting also produced an action plan for moving forward with the story gathering that was clearly driven by the needs and the full participation in this process of "telling the story" about the Learning Centre.

Figure 3: Yekooche/Lheidli T'enneh Capacity Projects Evaluation Model

P = Project
    I = Individuals accessing service
CM = Community member
OO = other organizations (outside the
        community
	}Eagle on the Ground
	  Eagle in the Tree
	  Eagle in the Sky

This process of developing an action plan also reflects the cyclical process of the AI model. The stories that will emerge should help the community determine how to move forward but they should also help the group continue to be innovative based on a fuller understanding of what has worked in the past during the development of the Learning Centre. As Ashford & Patkar (2001) note: "as the group analyzes these stories, they develop a better understanding of the conditions that enable innovation to occur. Further inquiries into these topics are then possible" (p. 31).

Furthermore, it is clearly evident from the findings of this study that support by the Chief, Council, and Elders was a key factor in the emergence of what is now a very significant and meaningful community-based learning process. This support has involved efforts such as:

making the decision to house the Learning Centre in a central, neutral space; providing timely encouragement to the project coordinator during the early days when the survival of the Learning Centre seemed tenuous; encouraging participants to explore their community's traditions, skills, and values via the use of technology; providing the necessary administrative infrastructure via the Band Office to support employment opportunities in the Centre; and being effective spokespeople for the Learning Centre that enables people in other locations to understand the impact of the Centre on the community.

In the last section, the views of the Chief were reported on the importance of the youth "learning the language of treaty" and acquiring skills related to information gathering and analysis that can be used for supporting the shift to self-governance. The findings that describe the de-institutionalized learning model that provided a foundation for the emergence and growth in cluster-based learning suggest there are a number of transferable skills related to self-governance that are already being honed and enhanced such as creative problem-solving, inquiry-based learning, information literacy, team development, self-directed learning, mentoring and coaching, and communications-related competencies such as reading, writing, and spelling.

Looking towards the future, the continued success of the Learning Centre will also require more creative forms of resourcing. One of the key challenges mentioned by both the Chief and project coordinator involves coordinating and aligning the different sources of funding and support that have come from multiple agencies and governmental offices, all of which have their own funding cycles, accountabilities, expectations, and reporting requirements. Although it is likely that total seamlessness in multi-agency coordination will never be fully achieved, the sustainability of the Learning Centre will be affected by the presence or absence of multi-year funding arrangements that enable participants and supporting personnel to make commitments to projects that can benefit from cluster-based learning. These multi-year agreements also need to be constructed to respect the ebb and flow of life within the Yekooche community which includes seasonal activities, commitments to traditions, as well as unforeseen circumstances, all of which can affect the duration and timing of both individual and shared activities within the Learning Centre.

Conclusions, Implications, and Future Directions

This research has used an Appreciative Inquiry framework to learn about how to best establish, implement, and sustain the use of a cluster-based, technology-enhanced learning and teaching model to help prepare the Yekooche community for a post-treaty world. It is clear from the perspectives of staff, participants, and other community members that the Learning Centre has been successfully established as a viable, engaging, and welcoming place for community members to explore their curiosities about learning with the assistance of various kinds of technology-assisted tools. A wide range of both individual and, more recently, group projects have been produced that feature media-rich elements such as video, audio, graphical, and textual elements that have been enhanced by the skills participants have acquired in the Learning Centre. Participants, staff, and community members have all highlighted the role that the Centre now plays as a central gathering place and a magnet for collective expression of deeply-rooted values such as "respect" and "empowerment" through the learning processes that have become dominant within the Learning Centre.

The Centre has helped the community take important steps forward towards enhancing the knowledge and skills that community members will find helpful in a post-treaty world. This has been accomplished by serving as a catalyst for individual creativity and group-oriented problem solving, by helping to build self-confidence and risk-taking, and by stimulating interest from younger members of the community to engage in the shared pursuit of common interests via cluster-based learning. Arguably it is the youth who are the people who have been the most disengaged and disenfranchised members of the community in the past and have the most to gain from building a stronger community with the assistance of a common learning place, a facilitative learning model, and accessible and usable technologies.

Cluster-based learning has played an important role in the success of the Yekooche Learning Centre, although the process of engagement unfolded in a way that was not originally intended or imagined. A key revelation not anticipated at the onset of this study has been the emergence and evolution of a de-institutionalized approach to learning and teaching that maximized the opportunities for participants to pursue their own interests and to find ways to meaningfully engage in technology-enhanced learning opportunities. This insight underscored

the importance of valuing and fostering individual engagement and curiosity before the cluster approach could be encouraged and even supported.

This "de-institutionalized" learning approach evolved through trial and error as well as success and failure. Reflecting on these experiences helped to articulate a robust set of five characteristics that defined the approach used: creating a welcoming environment; being patient and observing first; letting go own assumptions about learning; engaging curiosity; and supporting the next steps. From the data gathered in this study, it appeared that following this de-institutionalized process contributed to the emergence of groupings of individuals who had shared interests in specific topics. Thus, cluster-based learning "naturally" emerged as an eventual by-product of the de-institutionalized learning model as opposed to being an imposed and highly-structured starting point for technology-enabled learning. The more that people became aware of the impact that the new teaching and learning approach was having on numerous individuals involved with the Learning Centre, the more opportunities were created to extend the learning to other community members as well as to create clusters of interest in group initiatives that had more broadly-based benefits in the community.

Following the five central characteristics of de-institutionalized learning described in the previous paragraph also helped to ensure that the cluster-based learning model was highly aligned with an Aboriginal learning model that was deeply-rooted in the community. Implementing this approach in an incremental and recursive way demanded that the project coordinator as well as the participants focus on learning needs that were emerging in the 'here and now.' They need to put aside any pre-occupations with the real or imagined expectations of previously-used teaching strategies. This included those strategies regarding a more highly-structured and pre-planned approach to cluster-based learning.

The defining characteristics of the cluster-based learning approach found to be most successful in the Yekooche Learning Centre are highly consistent with the attributes associated with the "new system" of education and training delivery that Greenall & Loizides (2001) suggest needs to complement more entrenched ways of supporting Aboriginal learners. Attributes of the new system include: a focus on the teacher as knowledge facilitator; the value of information exchange rather than transmission; flexibility in delivery, training, and support

methods; anytime, anyplace learning; as well as self-directed and collaborative forms of engagement.

Some of the results found in this study regarding the use of cluster-based learning mirror the findings of research that has been done on project-based learning in traditional educational settings. The findings reported in this study suggest considerable alignment between the cluster-based learning that successfully evolved in the Learning Centre and these criteria reported by Thomas (2000) in the introduction to this report. Furthermore, Thomas's research suggested that project-based learning is an effective and motivating means of teaching students cognitively complex processes such as planning, communicating, problem solving, and decision making. Certainly, the results of this study suggest that motivating students is critical to the success of cluster-based learning and that engagement in cognitively complex processes is dependent on the degree of student interest in the topic.

In addition, Thomas argued from his analysis of previous studies that the effectiveness of project-based learning as an instructional method may be dependent to a great extent on the kinds of supports provided to help students learn how to learn. Again, this argument is relevant to the findings of this study. Supporting, in small successive steps, the emerging interests and queries about how to engage in an ongoing process of discovery became an important part of the scaffolding that enabled learners to achieve success and to share their deepening insights with others who had similar interests in the Learning Centre.

The findings shared within this report also shed light, not only on the most viable cluster-based learning approach, but also on complementary strategies that can continue to support and sustain the use of the Yekooche Learning Centre. One key strategy involves questioning and, even suspending, assumptions about the most appropriate ways to implement technology-enhanced learning strategies in remote communities like the Yekooche Nation. A computer-in-every-home approach that involves the remote training of key community members was eschewed for a community-based strategy involving ongoing mentoring and facilitation that enabled Centre participants to gradually gain confidence, develop critical skills, and acquire a breadth and depth of experience to help them engage in broadening applications of cluster-based learning. The shared, community-based ownership that resulted from this growth in participant engagement was critical to supporting a shift in the Learning Centre to support more project-

based learning opportunities as well as the individualized approaches already being encouraged. This was a key step in the capacity-building process.

Furthermore, "de-institutionalization" of the teaching and learning process is another important lesson learned that can inform future efforts to sustain the effective use of the Learning Centre. This de-institutionalization involved resisting the application of Westernized, highly-structured, formalized and sequentialized approaches to teaching in lieu of more flexibly-applied and responsive coaching, mentoring, and facilitation strategies that are more supportive of the key attributes of Aboriginal learning outlined in Table 1. In the future, the project coordinator has cautioned that in order to maintain a high level of participant interest, it will be important for the Yekooche community to resist wholesale efforts to "re-institutionalize" the teaching and learning approaches that might be a future by-product of well-intentioned partnerships and funding agreements, including any future efforts to promote and enhance cluster-based learning.

As indicated by the study's findings, it will be important for the longevity of the Learning Centre that the collective achievements and insights associated with cluster-based learning continue to be shared, recognized, and celebrated. The experiences in implementing the Learning Centre over the last 20 months have reinforced the old adage that "success breeds success." The development of a collaborative, community-based evaluation process that emphasizes the importance of telling and sharing stories of success and impact is an important and encouraging step forward. It most certainly would not have occurred without the broadly-based community interest in the outcomes of this project.

As well, the Evaluation Framework described in Figure 3 became a central and even critical part of the knowledge mobilization process that could not have been anticipated at the beginning of the project. Knowledge mobilization can be defined as "the active process of creating linkage and exchange between producers and users of data, information, and knowledge to engage in value-added activities" (Levesque, 2005, p. 5). Gladwell (2002) and Wenger et al. (2002) stress the importance of creating a "vibrant" community to support the effective exchange and mobilization of knowledge. However, in keeping with the participatory foundations of this study, future specific knowledge mobilization strategies that build on the current success of the Learning Centre – other than the ones already in place – will need to be determined and embraced by the community itself if they are to be impactful and sustainable.

Moreover, this particular research report is best viewed as an enlightening snapshot in time and not a definitive work. As a snapshot, its main limitation is that, in its current form, it does not yet represent the full multiplicity of voices with the community regarding the enduring and long-term impact of cluster-based learning in the community and how these perspectives can guide the future growth of the Learning Centre. Participants' and community members' stories related to the projects derived from experiences with cluster-based learning are currently under-represented in this research process and, thus, their limited use as a data source in this study potentially detracts from a full appreciation of the participants' perspectives and experiences. This was a conscientious and not a negligent omission. To honour and respect the community's value placed on these stories, a decision was made by the researcher to wait until the participatory Evaluation Framework could be fully implemented and collaborative decisions could be made on the best way to gather these stories and share the insights. This decision is also in keeping with a commitment taken by the multiple agencies associated with the Learning Centre project to work together on supporting the implementation of the Evaluation Framework. The timing of this shared decision making process has precluded the inclusion of the stories in this version of the report. Furthermore, it would have also been helpful to hear from community members who did not use the Learning Centre to more fully understand why they chose not to participate in any of the programs or services offered.

A companion research project, funded through other sources, was designed to explore how creating a learning environment through the use of technology can increase individual and community capacity for self-governance that encourages sustainable, cooperative, and interdependent relationships within a remote community (Drummond, 2009).

The decision to develop the community-based Evaluation Framework underscores the importance of using a research process that is convergent in its intent and divergent in its potential impact. The convergence is derived from the use of a common evaluation model that meets the needs and goals of different funding agencies as well as the community itself. It was initiated to avoid placing undue pressure or stress on a small group of community members that might result from gathering overlapping kinds of data serving similar but distinct purposes for different project partners. The research process must remain cognizant of and empathetic to the realities of working with people in a small community who are managing all of the commitments

made to a number of community development projects. This was a very critical point of respect that the researcher assumed. The needs of the community members involved in the Learning Centre had to take priority over the timelines established by outside agencies for reports. Furthermore, the research process needed to be divergent in the sense that it could help reflect the multiplicity of perspectives within the community as well as various ways in which the results can be used to support further community development. The common Evaluation Framework enables both these convergent and divergent dimensions to support the effective use of the results for community development.

As well, this research provides important insights about the use of Appreciative Inquiry as a research methodology in an Indigenous context. The focus in the study on building on existing community assets and strengths that is foundational to AI creates an alternative and potentially energizing research purview that is clearly quite different from more traditional approaches that tend to problematize or pathologize (Ermine et al. 2004) the research endeavour and emphasize deficit-based thinking. Thus, after applying the methodology to the Yekooche Learning Centre study, these appreciative principles still seem relevant. The real danger, given the need for a meaningful involvement of the community, would have been in applying the four-phase model in a rigid fashion with highly-structured activities. As the lessons unfolded about the need for developing a different approach to cluster-based learning, the need became clearer for a more flexible application of the AI model. This meant that the *Discovery* and *Dream* phases took considerably longer to complete and that the *Design* and *Delivery* phases are still evolving. The process was more iterative, and less sequential than what had been originally planned based on the researcher's previous experience with AI as well as the various approaches available in the AI literature. The researcher, fully cognizant of the modifications and adjustments that had been made to the cluster-based learning model, felt that the stakes were too high to support a slavish insistence on a prescribed process that might have seemed irrelevant and artificial to participants. There was no desire to negatively affect participants' burgeoning interest in learning at the Centre or to involve them in a process of data collection that might have seemed irrelevant when their time commitments demanded that learning to use new technologies and apply these knowledge and skills was the priority.

Thus, it became evident that participants, in order to participate purposefully in the research process required a frame of reference informed by substantive experience with the technology first before they could begin to share their own perspectives. The collaboratively-developed Evaluation Framework was designed to meet this purpose and has been informed by the efforts to apply models such as AI within this particular community. Thus, the important lesson learned in applying the AI model as a form of participatory action research is that it still needs to be subservient to an inductively-developed research and evaluation framework developed by the community if it is to have real value and meaning. Like the learning model, the AI process has to unfold in a natural way that respects the ebb and flow of community events, activities, and desires. It should not be force-fitted or shoehorned into the lived experience of participants. Degrees of readiness, relevance, and responsiveness need to be gauged and respected.

Thus, perhaps, it is best to view the Appreciative Inquiry process as Ashford & Patkar (2001) suggest, as a cycle where a new round of discovery, dreaming, designing, and delivering can occur at any time" (p. 35). Although the four phases appeared in Table 3 in sequential form, the nature of AI initiatives often means that inquiry and change happen simultaneously and inter-dependently. Reed (2007) observes that practitioners who have worked with a variety of groups and organizations in implementing AI initiatives acknowledge and value the iterative, cyclical, and inter-dependent nature of the different phases of the inquiry. Experience with AI in the current project supports these observations. The inquiry phases did not happen in a strictly linear fashion, but functioned quite recursively and inter-relationally.

Finally, Greenall & Loizides (2001) have called for a strengthened understanding of the impact of learning technologies on Aboriginal learners and suggest that Aboriginal communities need to have a better understanding of "what works and what does not" (p. 20). In creating enhanced Aboriginal digital opportunities, they have emphasized the importance of researching and sharing the results of initiatives that provide creative and meaningful ways of bridging the digital divide. This research study provides one community-based example of a collaborative effort to systematically and meaningfully implement an approach to maximizing the use of learning technologies to support collaborative, project-based learning and community-wide development. Although there appears to be considerable consistency between the successful

tenets of the teaching approach that effectively supported participant learning at the Learning Centre and the key attributes of Aboriginal learning described by the Canadian Council on Learning (2007), caution must be used in generalizing to what technology-enhanced and capacity-building strategies would work in other Aboriginal communities. One of the principal discoveries in this research process has been the importance of resisting the application of prescriptive or deductively-based frameworks that potentially limit understanding of what strategies *could* work, or worse yet, limit the possibilities or potential for strategies *to* work. What will be ultimately important is the learning that can be derived from reading this report and determining the insights that can be gained from being flexible in the application of models and processes and being open-minded in learning from the very community that is being served.

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Appendix A:

**Foundational Principles for Aboriginal Learning and Education
from Battiste (2005)**

- Aboriginal peoples view education as a vital area for holistic and lifelong learning and for transformation of their economic livelihood.

- Learning is acknowledged as a lifelong process that requires both formal and informal opportunities for learning for all ages.

- Land, the knowledge and skills in and from place, language and culture are integral parts of the learning and education process among Aboriginal people.

- Aboriginal learning must be integrally linked to elders and community and opportunities realized to build upon these connections and their language, knowledge and culture.

- Learning development must focus on Aboriginal individuals in a holistic manner based on their spiritual, intellectual, emotional and physical selves and acknowledge and foster their gifts and abilities.

- Selecting and legitimating curricular knowledge are issues based on power, voice, and agency that require Aboriginal people to be participating in all aspects of curriculum development, deciding on the knowledge to be included in the curriculum, and in what languages the curriculum is be delivered. This requires new skills and knowledge to bring Aboriginal people into these participatory realms as well as power changes to systems in policy making.

- The participation and involvement of parents and community is essential to building a successful learning continuum and healthy resilient communities.

- The legitimate right of Aboriginal peoples across Canada to develop and control all aspects of their own education must be recognized, resourced, and realized.

- Inequalities in educational funding create uneven capacities for Aboriginal people and require immediate fiscal and applied solutions.

- The development of any learning and research activities with and for Aboriginal peoples must be developed within ethical principles of research involving Aboriginal communities and leadership. These are to ensure that Aboriginal peoples are invited as participants and owners of research, as well as researchers, who are involved in all aspects of the research, the analysis and conclusions,identifying the solutions and recommendations that they will benefit their nations and communities.

Appendix B

Key Informant Interview Questions

1. When you reflect back on the process of getting the Yekooche Learning Centre established and making it viable, what do you see as being some of the most important milestones for you?

2. What positive impact do you think the Learning Centre has had on the community?

3. Based on your experience, what do you feel are the key components of the successful learning model that was implemented?

4. What do you feel were the greatest lessons learned from this experience?

5. What do you think you would do differently if you could implement in the Learning Centre again from scratch?

6. How do you see the Learning Centre, from your experience so far, helping to facilitate that transition to self-governance?

Peer Interview Questions

1. How have you been involved in the Learning Centre? How do you spend your time when you're at the CLC?

2. How do you feel you've benefitted from being involved in the Learning Centre?

3. Why do you keep coming back to the Learning Centre?

4. What is the value of the Learning Centre within the Yekooche community? [or alternatively, "What role has the Learning Centre played in contributing to the great things in our community?" Or "How do you feel others in the community have benefitted from being involved in the Learning Centre?"]

5. Do you think that the Learning Centre is a "success story" in the Yekooche Community? If so, in what ways?

6. What future improvements should be made to the Learning Centre?

Appendix C: Participant Consent Form and Letter of Invitation

RESEARCH CONSENT FORM

My name is Doug Hamilton. I am working with members of the Yekooche First Nation to gather information on how the Yekooche Learning Centre can be used most effectively within the community. My credentials with Royal Roads University can be established by calling Dr. Mary Bernard, Associate Vice President of Research at 250-391-2553. This research is funded by the Canadian Council on Learning.

This document constitutes an agreement to participate in a collaborative research project, the objective of which, in agreement with Yekooche First Nation, is to explore how to create a learning environment through the use of technology that increases individual and community capacity for self-governance and that encourages future learning opportunities within a remote community.

The research will consist of engaging in participatory planning sessions at which time notes will be recorded on flipcharts, audio tapes, and video tapes. The notes will include your perspectives on the value of the Yekooche Learning Centre, your ideas regarding a future vision for the centre, and ways that help to ensure that the centre continues to be successful. Through this research, I hope to learn a lot more about what makes learning with technology successful and how to help build on this success within the community. The primary use of the research will be to share any recommendations or insightful strategies derived from this participatory research that is helpful to the Yekooche community, other First Nations, granting agencies, or other people working with technology-based learning initiatives in Aboriginal settings.

Information will be recorded in hand written format, on audio tapes, video tapes, and flipchart notes. It will be summarized, in anonymous format, in the body of the final report. At no time will any specific comments be attributed to you personally unless specific agreement has been obtained beforehand. All documentation will be kept strictly confidential.

You are not compelled to participate in this research project. If you do choose to participate, you are free to withdraw at any time without prejudice. Your decision to participate in this research has no bearing on your status in the Yekooche Learning Centre. Similarly, if you choose not to participate in this research project, this information will also be maintained in confidence.

By signing this letter, you give free and informed consent to participate in this project.

Name: (Please Print): _____

Signed: _____

Date: _____

LETTER OF INVITATION

<insert date>

Hello,

I would like to invite you to be part of a research project that I am conducting in collaboration with the Yekooche First Nation. This project is part of an ongoing project funded by the Yekooche First Nation, Royal Roads University, Ministry of Aboriginal Relations and Reconciliation, Ministry of Advanced Education to help establish and support the Yekooche Learning Centre. My name is Doug Hamilton and my credentials with Royal Roads University can be established by calling Dr. Mary Bernard, Associate Vice President of Research at 250-391-2553.

The objective of the research project, in agreement with Yekooche First Nation, is to study how a participatory process can be used to help develop and implement a plan to enhance technology-based learning in the Yekooche First Nation. Through this research, I hope to learn a lot more about what makes learning with technology successful and how to help build on this success within the community. The primary use of the research will be to support the development of a "success plan" for the Yekooche Learning Community and to share any recommendations or insightful strategies derived from this participatory research that is helpful to the Yekooche community, other First Nations, or for other people working and studying the use of technology-based learning in aboriginal settings.

The research project will consist of collecting and analysing flipchart notes, audio and video recordings, and insights from both formal interviews and informal discussions during my time in your community. This information will be based on questions that refer to the community's use of the technology and ways to enhance these opportunities.

Your name was chosen as a prospective participant through your interest in the Yekooche Learning Centre and because of your interest and use of technology within your role in the community.

Information will be recorded in hand-written format, on audio tapes, video tapes, and flipchart notes. You will be asked permission for the use of any information that you directly provide in any of these formats. The information, where appropriate, will be summarized in anonymous format in the body of the final report. At no time will any specific comments be attributed to any individual unless your specific agreement and permission from you has been obtained beforehand.

A copy of the final report will be shared with you, the Band Council, and the funding agency supporting the project, the Canadian Council on Learning (CCL). In addition to submitting my final report to the CCL, I will also be sharing my research findings with Provincial Ministry of Aboriginal Relations and Reconciliation, First Nations Technology Council and Royal Roads University.

You are not compelled to participate in this research project. If you do choose to participate, you are free to withdraw at any time without prejudice. Your decision to participate in this research has no bearing on

your status in the Yekooche Learning Centre. Similarly, if you choose not to participate in this research project, this information will also be maintained in confidence.

Please feel free to contact me at any time should you have additional questions regarding the project and its outcomes.

Sincerely,

Doug Hamilton, PhD

Email: doug.hamilton@royalroads.ca

Telephone: 250-391-2600 ext 4103

Appendix D:
Coding Categories Used in the Qualitative Analysis

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advisory boardbuilding community capacity     challenges communal space
     dealing with challenges - ebb and flow  from learners to teachers
     funding and outside support  hopes and dreams  indicators of success
     learning-building on interests and curiosities     learning-building
on meaningful experiences   learning-mentoring     learning-reflexive
thinking   learning-traditional   making it happen next steps ongoing but
shifting kinds of support   ownership-investment    ownership-involving
people      ownership-providing visible support     ownership-
responsibility   ownership-the keyquestioning assumptions about
technology implementation    self-governance   spin-off projectssuccess
breeds success    success breeds success - cultural relevance    success
breeds success - establishing relationships   success breeds success -
sharing stories  sustainability of initiatives     teaching-building
confidence teaching-building trust     teaching-cluster-based learning
     teaching-engage curiosity   teaching-flexibility   teaching-letting
go    teaching-observe first teaching-patienceteaching-reciprocity
     teaching-relevance to own world   teaching-supporting the next step
     teaching-trial and error     teaching-welcoming space
```

Appendix E:
Summary of Community Projects Supported by the Yekooche Learning Centre
(January 2009)

Stories of Success in the Yekooche Learning Centre

- hiring of a Research Assistant to chronicle stories of success within Yekooche Learning Centre who also fulfills the role of Community Communication Offcier based in the Learning Centre by maintaining the Yekooche Newsletter and will eventually take over the maintenance Yekooche First Nation website and the development of the website for the Learning Centre.

Sustainable Forests Assessment Project

- Invitation for Yekooche First Nation to participate as a co-researcher with Royal Roads University Centre for Non-Timber Resources, in the Forest Science Program proposal "Can Forests Sustain Livelihoods? An Assessment Methodology based on Local Knowledge and Expectations"

First Voices

- First Peoples Cultural Foundation and First Voices supported the development of the Yekooche Carrier Language archive program, resulting in the collaboration between Yekooche youth and Elders in recording their traditional language.

Video Documentary Project – First Nations Technology Steering Committee

- First Nation Technology Council in collaboration with Royal Roads University initiated a Video Documentary project of the Yekooche Learning Centre that may be produced in both Carrier and English, will utilize Yekooche youth skills and creativity in developing the documentary.

Mountain Bike Trails Project

- A mountain bike trail development around the perimeter of the community, including skill development and safety programs. The proposal has been presented and approved by Chief and Council and project members are now waiting for spring to arrive to begin. Support and funds for further project development has been designated by Yekooche First Nation, and will include local suppliers and mountain bike trail building expertise. A number of members have registered for skills training in preparation of the trail building, including First Aid and Chainsaw Safety and Handling.

Yekooche Baseball Team

- Setting up and supporting a local baseball team to participate in regional and area tournaments and to explore options and funding for developing a baseball diamond in the community

Community Music Program

- A community music program that provides children and youth access to instruction and care of a variety of musical instruments; to create a community music band that is cross-family and community-wide; and to explore traditional and non-traditional music in a culturally appropriate way; to revive interest in their own music, dance and culture.

Cultural Dress and Dance Program

- A cultural dress, dance and presentation program for children and youth to discover traditional Yekooche ceremony, dress and dance. This project will be co-supported with the Jean Marie Joseph Elementary school in the community and is intended to assist participants in not only creating their own regalia, but in learning traditional protocol and story around the creation and decoration.

Yekooche Learning Centre Showcase Celebration

- A Showcase Celebration will be held in the community by school end, June 2009. It is intended that this event will provide an opportunity for the community to showcase and celebrate the success of their engagement and commitment over the last 2 years. It is anticipated this will include music, video, language, traditional ceremony and sports events, dance, food and the opening of the mountain bike trail. It is possible that in addition to the Community celebration, that this event will be invitational to all contributors.

Employment in the Yekooche Learning Centre

- Three youths are now employed in the Learning Centre, filling roles of Technical, Administration and Communications; additionally... expanding the benefit of engagement and learning/training opportunities that have come to the community (not only through the Learning Centre... but supported by), existing employment roles in the community include: three Teacher Assistants with Jean Marie Joseph Elementary, Early Childcare Assistant in the Headstart Day Care, three assistants in the Health Resource Centre, and janitorial and heavy equipment operators with the community Public Works. Additional roles supporting the Treaty negotiations and Treaty Related Matters, Youth Liaison have also being identified and filled by a band member.