"Expert on Drums, Could Be Experter": An Ethnographic Case Study Investigating the Learning Principles Displayed in Video Gaming Among Inuit Youth

by

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Abstract

The aim of this research is to conduct an analysis of a successful learning experience—interactions with video games—among Inuit youth in one Nunavut community to determine what factors help these Inuit learn. Through this analysis, questions relating to whether video games constitute a technology of learning for Inuit as well as what characteristics of digital games lead to increased engagement among the youth were addressed. Using the theoretical framework of cultural studies, the work of James Paul Gee, along with the pillars of *isumaqsayuq* (Inuit traditional ideas of teaching and learning), this study finds that video games are a technology of learning for Inuit youth and factors such as autonomy, competition, contextualized content, and self-efficacy all contribute to the youth's continued engagement with video games despite their increasing difficulty.

Acknowledgements

This thesis would not have been possible without the cooperation and openness of the Inuit youth of Nunavut, in particular those of the community at the centre of this study. My experiences in the north have changed my views of the world. I thank every person in the north for allowing me to become a part of your community and teaching me about your culture. I thank the Inuit youth who gave of their time to complete surveys for me and who were willing to sit down and have a chat with me about "games". During my career in the north, a number of students tragically passed away and my outlook on teaching and life in general was forever impacted. As you read this study, the impact of two of these particular students and their passing is mentioned frequently. I dedicate this work to their memory.

I would like to express my gratitude to my supervisors, Dr. Dorothy Vaandering and Dr. Ursula Kelly, whose expertise, understanding, and incredible patience was invaluable throughout the learning process of this masters thesis. Their ability to constantly send me deeper into the data with different sets of "lenses" has made this thesis what it is. Their mentorship has altered the way I view education, schooling, and the type of teacher I am. I doubt I will ever be able to truly convey my appreciation fully but I owe them my eternal gratitude.

There are no words of gratitude that I could write that would express what my parents have meant to me throughout my entire educational career. Without the patience and

work ethic they have imparted and their encouragement at every step of this project, there is no way I ever would have completed this research.

My wife and son have been an integral part of this research. When I began this study my son had not yet been born. Now as I complete it a second child is on the way. Throughout all this, my wife and best friend, Jennifer, has ensured that whenever possible I had the time and a quiet space in which to work on the many versions of this work. She was a constant sounding board who knew what I was trying to get at even when I could not get the words. Her love, encouragement, sense of humor, and editing assistance helped propel me through all the ups and downs of completing this thesis.

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Preface

"It's a bit like putting a square peg in a round hole" and "they're not very bright up there" were the first comments I heard regarding the learning potential of the Inuit of Nunavut after accepting a teaching position in the territory. Offering these observations were teachers who had previously taught in Inuit communities and left, shortly after, with what can only be described as narrow views of the North and its people. Further comments, including "the moment you step off the plane the Inuit can see right through you," created a sense of mystery for me of a group of people that were to be viewed and analyzed as opposed to be interacted with as fellow human beings.

The portrait painted by those familiar with the situation left me, a young teacher with no prior experience among the Inuit, feeling even more removed from a group of people I was to teach with and live among for the next year. Before applying for the job, I knew next to nothing about the Inuit or Nunavut. I scoured the Internet and there was little there about these two topics, outside historical and cultural references, and even less about the actual community I was heading to. I had spoken to a teacher with previous northern experience before applying, and as we looked at the list of jobs in Nunavut, of which there were many, he went through the list telling me which communities were "good" and which ones were "bad." "Good," I believed, referred to Inuit–*qallunaaq* (non-Inuit, See Definition of Terms, p.40) relations and the lower levels of violence and crime that occurred there. As far as I know, the teacher had never been in any of the communities on which he commented but instead relied on what he heard through the media and by word of mouth. According to him, hearing nothing about a community,

good or bad, was a good sign; hence, I applied for and accepted a job in the community where I would spend eight years.

Perhaps it is telling that several former northern teachers told me that if I was offered a job in Nunavut, before I accepted I should first call the RCMP in the community. There was talk of high suicide rates, domestic violence, and issues with alcohol. Upon talking to the RCMP in the community, any fears I had were assuaged by the comment that it was one of the best communities one could go to in the North.

During that first year, these comments echoed in my mind as I heard news reports of a November 2005 meeting of first ministers and Aboriginal leaders describing an academic gap between Aboriginal students and the rest of Canada and a pledge to end it by 2016. Add to this Justice Thomas R. Berger's critical report (Berger, 2006) describing Inuit education as existing in a state of crisis and the enthusiasm with which any young teacher enters their first full-time classroom was decidedly diminished. It was replaced with ambiguity and uncertainty about what I was actually going to do once I was teaching in the community.

Upon arrival at the school, I set to work making the classroom my own. Discovering the materials left from previous teachers did little to help me regain my enthusiasm—filing cabinets filled with word searches and cupboards filled with photocopied worksheets containing deskwork far below the "appropriate" level for a junior high classroom. The excitement of my first full-time position and moving to a new territory began to dissolve after the first week or so of teaching. I then began to realize that this was going to be a much tougher assignment than I had originally thought. I had a class of nearly 35 junior high students, challenging in any community, but as I began to

find out where the students were academically, I began to get nervous about what I was supposed to be doing. I tried many techniques in those first weeks that had been successful in previous classes I had taught, but they now appeared to be falling short.

I was hoping that I could move these students forward in their education, regardless of where they were when I arrived. If I could move them forward, in my mind, I would be doing something right. I found myself moving closer to the level my initial testing found the students to be at, which meant I was getting closer and closer to those same worksheets I had disregarded when I examined the classroom.

I began to be overwhelmed, not only with the school situation, but with the community situation. As I looked around the community, I saw values displayed that were different from my own. These values covered the political, cultural, humanitarian, and education spheres of society. I was conscious of my outsider status in the community and was unsure how residents would react if I openly expressed my values which differed from theirs. The classroom situation worsened as additional students came back from summer camp, and I again found myself increasingly heading back to those photocopied worksheets. I was struggling and these worksheets were something the students could do easily and kept them occupied. This was necessary, I told myself; this was for survival.[1] As I write this now, I realize that this was all feeling a little familiar. I had encountered these beliefs before and never felt I could possibly feel the same way.

[1] The use of the metaphor of survival is one that is colloquial among teachers and does not reflect my feelings toward teaching in the North specifically—it instead is the statement of a teacher that understands the importance of and therefore the stressfulness of the career of a teacher.

Apart from an administrator that had spent decades in the North and believed in the capabilities of the students, the majority of southern[2] teachers I met over the years, which were many as the North has a high turnover of school staff, seemed to be stuck in the same rut of assuming these students were not able to learn. It is important to note that I did not have in-depth conversations with these teachers, and it is quite possible that they were struggling with the same internal conflicts as I was. The staff, at any point during my teaching assignment, included people from all across Canada, and in some cases the world, of various religious backgrounds and personal beliefs.

There was a dichotomy of teachers at the school: those freshly graduated and those nearing the end of their careers or actually retired from a position in another province who then continued to teach in the North. The young teachers often held the same type of beliefs about the Inuit and their ability to learn as I did. Thankfully, this was not always the case, as a few of these new teachers came to the North and put their heart and soul into helping these students move forward in any way they could. This was evident from the amount of time they spent at the school with students and the variety of activities they were engaged in with them, both academic and extra-curricular. There were other teachers who appeared to allow their students to do whatever unsupervised activities they wanted while in school, saying aloud that if students at least enjoyed school they would eventually start learning. There were teachers who were quite baffling in their views about teaching in the North. One teacher with significant experience in the North could, in one minute, be doing everything possible to help the students and, in the

[2] Throughout this document when referring to the "outsider" dominant culture and its impact on the North, I have chosen to use the term "southern." Those living in the North feel great isolation and the terms "down south" or "southern" often refer to the encroachment of people and ideas from outside the North.

next minute, could be screaming things like, “Do you just want to be a stupid Inuk all your life?” Frustration was widespread.

Unfortunately, of all of these diverse staff members, the most vocal were the ones that held the belief that the only way to succeed was to simplify lessons and to lessen academic expectations in their classrooms. In those classrooms, students had little interest in learning and demonstrated no persistence as they attempted these “simplified” tasks. Being the most vocal, this particular section of the staff had the most impact on the rest of the staff, and their beliefs affected most aspects of school life.

Personally, I accepted my position with no knowledge of the Inuit or their ability to learn. As far as I was concerned, and I mean this sincerely, the Inuit were able to learn on exactly the same level as everyone else. I believed that their learning abilities must mirror those of the students that I had grown up around and that I had taught in the two years since graduating from the Faculty of Education. When looking at the fact that the students would be learning in their second language, I saw that as more about the different approach I had to take in teaching as opposed to how this would be affecting the students attempting to learn the material.

I believed at the time that a teacher’s only purpose was to help students learn. I believed that learning entailed memorization and regurgitation, which was where my expectations for my students lay. When teaching a class with students who, in the opinion of others, could not learn, it was not hard to become jaded and take the easy way through each day, confident that the students’ inability to learn was at fault and not the teacher’s inability to teach. There were times during the first year teaching in Nunavut, and perhaps still now, when I was certainly the jaded teacher.

As I entered my first classroom—in a new territory, among colleagues from many different backgrounds—I felt a need to prove myself as a teacher. It was also from one of my colleagues that I experienced for the first time the belief that I was a "stupid Newfie," a comment that made it even more important in my mind that I establish myself as a good teacher. It was like a quest I needed to go on to prove to this colleague that I was a great teacher and an intelligent person. Throughout my academic history, a good teacher was one that focused on grades and that taught the importance of math, reading, and writing. My focus was not so much on the well-being of my students in those early days as it was on what I was able to get them to learn, memorize, and regurgitate to me. I included cultural content in order to help me teach the curriculum outcomes as opposed to helping the students learn about themselves. Worksheets that maintained class behaviour and kept them quiet (another initial personal belief about good teaching—students working quietly) were the preference as I tried to "teach" the students. Looking back, I find it interesting that even this cultural content, which was nicely arranged in white binders on the shelves, was mainly curated by Nick Newbery, a White teacher, though one with 30 years of experience teaching in a variety of small Nunavut communities.

I have thought often about those first five months of teaching and if my students knew I was looking out more for myself than for them. Was I seen as just like all the other teachers that had come and gone throughout their education within that school? Was I, in fact, just like those other teachers? When I finally had the chance to rethink my approach to teaching and my beliefs about my students, the mystery of the Inuit as painted in the former teachers' portrait did not seem so magical. Despite our many layers

of down-filled clothing, perhaps the teachers getting off that plane were fairly easy to see through and our true intentions were worn like a badge, but often not one of honour.

At this point, it is necessary to provide a description of my own background and that of the community as a context for our interactions mainly through this research.

Background

Ethno-autobiography—Researcher background

I was born and raised in a small rural community in Newfoundland and Labrador. Both my parents worked in professional careers. This upbringing gave me little knowledge of poverty, apart from the fact that I knew it existed. I can only remember interacting with one or two families that, looking back now, I realize were below the poverty line. My parents always taught me that you treat everyone the same no matter their race, religion, or their financial status. Despite having this belief firmly engrained in my head, the majority of people I encountered and spent time with during my youth were White, southern, middle class, and financially secure.

I succeeded academically as I went through a school system informed by a banking concept of education (Friere, 2005). I recollect a system where the sheer volume of information obtained was deemed important, not necessarily the transfer and application of the knowledge in a later appropriate setting. Most people I encountered in my middle-class life held education in the highest regard, and since school exuded the banking concept of education, I came to value it as the most important aspect of education. I never thought about the application of the material being taught until I took a multiple-choice exam in psychology in university that required me to know how to apply

the knowledge and not just choose the answer closest to the appropriate definition of the terminology.

Culturally, until the age of 17 when I entered university, I existed in a community of White Newfoundlanders where *our* culture had a strong footing and many of the community members had no experience outside this cultural comfort zone. Only two non-White families resided the community and neighbouring towns—one family from China and another from the Philippines; these families were middle class and in professional jobs. When I entered university, there were people from diverse backgrounds, but none with which I regularly interacted. It remained the same White world that I had comfortably been raised in; I was a White Newfoundlander and the majority of people I saw were the same. True to my banking education upbringing, I read a great deal on other cultures, but had no experience. In fact, it was a grade 4 social studies unit on the Inuit, which I remember being taught when I was a student, that piqued my interest in the culture at a young age and that led me to apply for teaching positions in Nunavut communities.

Religion also played an important part in my upbringing and forms a key component of my worldview. I was raised in the Salvation Army denomination and so was well versed in the beliefs of Christianity, as well as in the specific doctrines and the pledge of the church that young members must sign, including not using alcohol, tobacco, or drugs, or partaking in gambling. While I am not a regular church attender in my adult years, I still feel guilty if I am even in the presence of alcohol, tobacco, or drugs and cannot manage to keep my attention on a game of poker. I was raised in a home where none of these things were ever present and here I was moving to a society where I had

heard stories about issues with alcohol and gambling in the North. As a result, I unknowingly entered the community with assumptions concerning the differences between the Inuit and myself. I was not yet aware of the abundance of tobacco or drug use in the community.

Though the Inuit in the community followed the Christian faith and the majority attended one of the three churches regularly, the negative characterization of drinking, drugs, and gambling was not taught at the same level as I had experienced. Looking back now at the beginning stages of moving to the North, I was not as innocent and naïve as I once thought. I was not a "White" knight that was coming in fully aware of the Inuit people, their struggles, and so on. Instead, I was a young person, fresh out of university, who was filled with assumptions relating to who these people were, and these assumptions were mainly negative. As much as I wanted to believe it, I did not approach that first day of teaching the Inuit as if they were on the same level as I was. Instead, I was unintentionally looking down on the people.

With these views and experiences of poverty, education, culture, and religion, along with a degree in history (written by the victors) and English (the secondary language of the North), a one-year education degree, and less than a year of actual teaching experience, I accepted a job teaching high school in Nunavut. For the first time in my life I was going to be immersed in an entirely unfamiliar culture where I was one of a minority in the community. Upon completing a half-time teaching position on the island of Newfoundland in late June, I had less than a month to have supplies shipped and to prepare for entering a new area of Canada. From the school district and the school itself, the main focus for new hires appeared to be that you be prepared for the long, cold

winter, not that you be ready to teach in a new culture that is different from southern Canada. When I entered my classroom for the first time, nothing had really changed in the way I viewed teaching or education. The one month between a Newfoundland and a Nunavut teaching job did not allow for a re-evaluation of teaching goals. Furthermore, my understanding of education to that point was that everyone valued it as I did and most students would learn in similar ways.

During the first five months of this teaching position I maintained my views on education and learning. It was a struggle, but I allayed my fears with beliefs that this happened to all new teachers, that the students were putting me through my paces, testing me, and any other number of teacher clichés. There was no re-evaluation or soul-searching regarding my teaching approach; there was no time to think *and* survive. The students' approaches to learning were different from my own; I grew up with the belief that education (the education found within the walls of a school) was the most important thing. The students I was teaching seemed to value everything else before the education they were enduring. I was raised by a teacher and a social worker who both championed education and its importance in my life. Upon first entering my classroom in Nunavut, I did not realize the importance of the history affecting the concept of education. Grandparents had attended residential schools and parents then felt the social repercussions of the schools; this legacy led to a great mistrust and continued anger toward the education system. As to beliefs about what needed to be learned, I learned things that I felt prepared me to head out anywhere in the world. For my students, their world was the community and we were not teaching things within the school that helped them succeed in their community.

My response to the continued differences coming to the surface was to try to champion the education system for the same reasons that my parents did. The stereotypical “It is important because you need to know it” comment came up over and over. I struggled with making these comments, but they were deeply engrained. The things I had been taught over and over were just as important for these students of a different language, culture, and generation, weren’t they? It was when the simple question “Why?” was posed and I could not give a coherent answer, that I wondered why the education we were offering was important to these students.

However, early in my northern teaching career, I ignored all of these differences; I fell into line with the teachers’ comments I first heard upon accepting the teaching job. It was in January of that first teaching year that re-evaluation of everything I ever learned about education was tragically thrust upon me. I was teaching a combined class of grade eight and nine and woke one morning to a call from the school administration. The tone of the call was evident immediately, and a member of the administration told me that one of my students had been found dead during the night, apparently from suicide. Having never encountered this type of tragedy before, I had no idea how to proceed. That afternoon, when classes resumed, I entered my classroom with no idea of what to say or do.

This tragedy and the feeling of walking into that classroom without that student shattered my preconceived notions of poverty, culture, and education. Labels and classifications were laid bare as these were no longer students or members of some foreign culture but instead were human beings that were upset, just as I was; who were

feeling a sense of guilt, as I was; and who were wondering "What could I have done?" just as I was.

This tragedy caused me to reinterpret much of what it meant to be a teacher, who my students were, and what it meant to be a considerate person. Among other areas, I re-evaluated

- my approach to education—As a social studies teacher, for instance, was it important to teach my students about what it was like in other places in the world or did that just make my students long for something out of their grasp, or view their own culture with disdain?
- my approach to teaching—Was having the students simply just copy my notes important at all? Did the students understand my lecturing in a second language with a Newfoundland dialect, and did this possible lack of understanding make them feel that they could not learn?
- my approach to discipline in the classroom—Were these students being yelled at in their homes? Was I the final straw if I was angry with them?
- my thoughts on the barrier between teachers and students that I learned in university— "A teacher is to be friendly, but not a friend" is one of the aphorisms I remember. I wondered whether those students really need a friend more than a teacher, whether that was allowed, or whether I was to interact with them always at least at arm's length, never truly listening to what they were trying to tell me. That is the "southern teacher" thing to do, but it was obviously not what these students needed.

All of these thoughts added up my main question after the tragedy: Did I contribute in any way to this student committing suicide? I did not knowingly neglect or hurt this student, but was I continuing a cycle of detrimental behaviour to which the education system had been subjecting these students for years? Did I make them feel inferior? Did I believe they were? What right did I have to think this way if, in fact, these were my default thoughts?

It took the tragic death of another student later in my northern teaching career to begin a process of introspection and analysis of myself as a teacher and of my teaching goals. A student I met upon my arrival in the community taught me about teaching the Inuit and their desire to learn, and also about what constituted education and learning. He demonstrated the successful learning that was occurring outside the school walls as opposed to the struggle that could be found in traditional classroom settings.

This student had learned about all aspects of hunting, construction, survival, geography, mechanics, and history in a cultural context while out on the land with his grandfather. When I arrived in the community, the student, then aged 17, taught me a great deal about what it meant to be Inuit in today's society. I often sat with this young man as he relayed knowledge that he had learned from the Elders of the community and was now proud to pass it on to the teachers that arrived in the town.

Additionally, he was a renowned volleyball player, a great leader and a true role model to the other players. Whenever a new coach or teacher with knowledge of the game arrived in town, he sought them out, introduced himself, and attempted to learn any new plays or techniques these people had brought with them. He dug deeper into the sport in order to master the skills needed for success on the court. As a student, he was always on

task but always lagged behind his classmates. It was not that he could not complete the material but that he was thoughtful and strove for perfection even in his printing. He once told me that the reason he did not ask more questions or try to give more answers aloud was that “Inuit do not like to be wrong.” Classroom education was not something he felt he could succeed in the way teachers expected.

This student worked at school for more than the four years usually allotted for high school completion, and teachers who had been in the community for a while began to grow frustrated with his slow progress. Eventually, he did complete all credits required except for the English departmental exam from the Alberta government. In fact, he attempted the exam twice and still could not pass it. He eventually resigned himself to the fact that he would probably not be able to graduate and moved on to other activities, including a significant trip with Canada World Youth. On this adventure, he thrived and learned a great deal about African cultures. He returned with added confidence and a renewed sense of the need to complete his education and asked to try the exam a third time. While he was waiting, the student was part of a search team seeking stranded hunters when his snowmobile went through the ice. He was later found frozen to death.

I still struggle with articulating the turmoil that I experienced when I received the early morning news that this young man had passed away. The first thing I felt was an immense pang of guilt. I felt I was part of an education system that allowed this man to pass away with the belief that he was not suitable for graduation. I represented a culturally biased system whose graduation requirements included an examination that expected this student to answer questions about experiences he knew nothing about. I felt deeply that I had failed this student, that somehow I should have been able to do more for

him, to teach him something more than I had. But I was limited by the requirements of the system. I felt I had failed because I towed the line of a system that penalized him for his thoughtfulness and for taking his time to ensure his work was good, instead of somehow finding a way around this final obstacle to his graduation. When I arrived in the community, there had already been years of struggle toward a more appropriate alternative to this examination, which could eliminate this unnecessary barrier to the students' educational success. Why had I not been more vocal in my opposition to the examination, not made more enquiries, and not shown more support for the alternative? The untimely death of this student was, in many ways, the final straw as I considered what the purpose of this education system was, and what my purpose was as a teacher in this system, in this territory, and in this community. It is unfortunate that it took these tragic deaths to make me think on this level.

I went to work and fumbled through the rest of the week, trying to maintain my composure as I struggled with these questions. I watched the students go through their school days and I overheard them speak of their home lives and I realized that the two meant little to each other. If the education students were receiving really did nothing to improve their home lives, what was the point? What was this education preparing them for? To leave their families and their homes in order to move south? To see southern culture glorified so that they feel their own culture is inadequate? To struggle with the curriculum so that they feel inferior to their counterparts in other parts of the country?

This young man was an example of the Inuit youth's ability to learn and succeed; he proved himself "brighter" than many people I have met who held university degrees. Contrary to the generalizations I heard from former teachers upon accepting this teaching

position, he was in no way “a square peg in a round hole.” Due to the restrictions placed on him in southern-style schooling, be they the time given for completion, or what constituted the “wrong” answer he was so afraid of giving, this student was never given the belief that he had what it took to succeed in the skills of schooling as outlined by his teachers.

These two teacher-student relationships and their tragic, premature ends in many ways bookended my teaching experience in the North. They influenced numerous thoughts and decisions I made while in the classroom and while becoming a part of the community. They led me to look for different approaches and techniques while teaching in a variety of courses and grade levels. These relationships have formed the cornerstones of my research in the last few years.

However, these interactions are just two of the countless relationships I have learned from throughout my teaching career in the North, all of which have factored into the present research. I continued teaching in Nunavut until 2012 and during that time taught Inuit students at all levels. Much of my experience was teaching in the intermediate and secondary grades, but I had the opportunity to teach in the elementary and primary grades as well. I taught in a variety of academic disciplines during my tenure, including both kinaesthetic courses such as art and music and more traditional courses such as English and social studies, as well as courses developed specifically by the government of Nunavut for the Inuit students of the North. Through these teaching experiences, I have learned what my students excel in and, conversely, what they struggle with. They have shown me that there is a significant disconnect between how they are

taught for the majority of their instructional time and what leads to successful learning experiences.

Additionally, I have spent time with students outside traditional academic settings, whether it be playing in an after-school band, travelling to sports tournaments, or taking field trips with students and Elders "on the land." These experiences have altered my understanding of success for my students and demonstrated how the ideas of inability and failure that some of the Inuit youth feel within the walls of a school are not necessarily evident outside, in their community and on the land.

It is important to note my experiences with video games, as well, to further underline my interest in conducting this research. I have grown up around video games and played them extensively. These games have always been a source of self-efficacy for me and, I believe, have contributed to my intellectual development. This interest in gaming led to conversations with many of my students that covered aspects of gaming—"Have you tried this game? Did you finish it on hard [level of difficulty]?"—or to stories of their actual gaming conquests. As students learned about my interest in gaming, they often visited me during break times, and these conquests were spoken about like badges of honour. One conversation that caused me a great deal of thought about the potential of video games was with a student who, although nearly 20 years old, was still in grade 10 and unfortunately was bullied and therefore often alone at school. Seeing there was no one in my classroom, he slowly walked in and began to talk to me about a massive, open world role-playing game called *Skyrim*. This game is designed so that it should take 50–60 hours of gameplay to complete, but it has enough additional content in this open world that, the developers claim, players could spend over 300 hours and still not have finished

everything. The student began to discuss missions he had completed, hidden portions of the world, and his next moves or decisions for his character. He understood the history and the mythology of the world of *Skyrim* and he spoke with a confidence and pleasure I had never witnessed before from him. These were not simply moving from point A to point B in a game. These were, instead, moves that had to be strategized, with differing groups that needed to be analyzed, understood, then applied to successfully complete the missions.

As I took part in these types of dialogues, I began to see a change in the students as opposed to when they discussed any aspect of their schooling. These young people were excited about taking part in games, were succeeding at difficult games, and were displaying immense pride in their successes. They were outlining to me their multiple approaches when dealing with difficult situations while interacting with the games, their incredible persistence, and their well-thought-out motivation to succeed. Discussions of their gaming practices also revealed a competitive spirit that I had often seen in sports but never within the school. As one student explained to me when I asked about gaming being hard, "it *is* hard . . . but it's fun too." This attitude toward what I, as a gamer, know to be difficult and mentally taxing went completely against what I had seen and heard about the Inuit and learning while I taught in the community.

I came to wonder if the confident comments of the teachers with previous northern experience might represent an uninformed, simplistic explanation of the struggles the Inuit youth were having in school. Teaching is not a job that allows you much time to reflect on the politics at play—perhaps they were not able to give these social politics proper thought. Much more exploration was needed here if I was to

honestly attempt to help these students learn anything. The work of James Paul Gee (Gee, 2007) had taught me that learning can take place in these games and here were students who, while perhaps struggling in school, were persisting in these games until they obtained success as opposed to withdrawing, as often happened with difficult situations in school. Clearly some sort of learning was taking place, and I wondered how it could be applied to their schooling. I began to look into the present research and to re-write the curriculum, while still addressing the outcomes, in order to use specific video games in the classroom.

Community

One could never accurately describe the people and all the nuances that make up a community such that people who have never visited the community or never been in the territory at all could properly understand. I arrived in 2005 to live in a community in Nunavut that has long been considered one of the few remaining traditional hamlets. Inuit skills and culture, and the Inuktitut language were all particularly strong up until the last 5 to 10 years. During that period, residents have informed me, these aspects of life in the community have declined significantly. This may have something to do with a yearly construction industry that increases the southern Canadian population of the community considerably. Four of the five main sources of employment for the community (the school, the northern store, the co-op, and construction companies) prefer that the majority of communication occurs in English. With an increase in population, the school has grown considerably, requiring more southern staff in order to operate, again increasing the cultural input of southern Canadians as well as the use of English. The number of

people moving into the community, as opposed to out of the community to bigger centres, has increased. This, along with one of the highest birthrates in Canada, has meant that the population in the past decade has risen by an astounding 36%, growing from under 700 when I arrived to approximately 1,000 residents.

Nunavut has a young population, with 49% of the residents being 24 years of age or younger (Government of Nunavut, 2014). The community at the heart of this research, due to its high birthrate, is in fact one of the youngest communities in the North. I am unable to speak to the reverence given to Elders in the past, but I can express that they are still seen by the youth and their parents as their tie to the past. They are few, but they provide the anchor to their culture and traditions that the Inuit desire. In the flood of modern technology and southern culture, their wealth of knowledge is sought out for everything from survival skills to curriculum development.

The Elders of the community at the centre of this research have witnessed huge changes within their lifetimes, they have told me stories of a time when only the Hudson's Bay Company post and the Roman Catholic mission existed where the present settlement is today. They were born and raised on the land in tents and igloos and recall vividly their movement into the first matchbox houses, four-walled structures with no rooms, in the permanent community. I have heard the Elders speak of having to pay rent for the first time and of having to move into these houses that were colder than their tents and igloos. One elder told me of bringing their caribou furs into the houses and continuing to use them, as they had no idea what the sheets or blankets were used for. Construction on the first housing of this type began early in the 1960s, with a flurry of construction occurring toward the end of the decade. For centuries before this permanent

settlement, the ancestors of the residents of the community lived off the land and thus the community was reluctant to move into the government-built structures.

Residents remember the identification e-tags that the government gave to the Inuit. Many still own them. E-tags were numbered discs that the government of Canada used in lieu of surnames for the Inuit; they looked like military dog tags. As missionaries and the government began to truly enter the North, they used these tags to satisfy their need for strict record keeping, and also because they were too ethnocentric to learn the names. The tags were used until the late 1970s. I have had Elders speak in my classroom about what it was like to be put on an airplane and sent to the region's residential school where they were unable to speak their native language or exhibit any sign of their culture. As an outsider and a teacher, I can see that a mistrust of both the education system and the government still exists among the people.

The community exists separated from all other communities by at least an hour on an expensive flight or by a snowmobile ride that may last from 12 hours to several days. The isolation of the community is made evident when one leaves the community by plane during the darkest periods of the year, when there is only an hour of dusk each day. The community, seen from the air, is a pocket of lights surrounded by endless miles of darkness. This remoteness has created a group of people that rely heavily on each other. They cannot always depend on help from other communities in Nunavut or from those "down south." That is why, when issues arise, they come together to solve the problems using the strengths of the different members of their community.

In many ways, the community is one large family with all members playing their part in helping the family survive. It's hard to become a part of that family. The majority

of people give their helping hand. I once witnessed the entire community, encompassing people of all ages, moving forward to pull a tow line after a machine was unable to bring a hunted whale any closer to the shore. With the help of all hands, the whale was indeed brought nearer to the rocks and then harvested to help feed the community. Nowhere is the family dynamic of this community more evident than in the birth of a child. The child is revered and upon a birth the whole community seems lightened of its burdens and celebrates. Children are loved unconditionally and cared for in the best way the community knows how. The community remains traditional when it comes to gender roles, with children as young as grade 2 learning how they can help their family. Girls are well versed early in the care of their younger siblings, while boys learn how to hunt, fish, fix machines, and build igloos.

It is a community of people who, despite the high unemployment rates, alcoholism, and increasing drug usage, still manage to find fun and laughter in their daily lives. Death remains too prevalent among the youth, and the community comes together to mourn the loss of many. Perhaps because of their ancestors' need to continue if a family member passed away, the community releases an intense outpouring of grief and then residents are forced to continue with their lives in the best way they know how.

When I first arrived in the community, the people, although incredibly friendly, were also wary of who I was and why I was really there. Was it for the money or the adventure, or did I really want to become part of their community? Though I did not approach my teaching assignment with the proper frame of mind, I was friendly and genuinely interested in their community and culture. *The Inuit Way* (Pauktuutit Inuit Women's Association, 1990) was published with the intent of helping people understand

the cultural underpinning of modern Inuit. The document states, “visitors who are friendly, sympathetic, and non-aggressive in the pursuit of information and develop some sort of rapport will find Inuit helpful and friendly” (p. 38).

It did take several years for the members of the community and I to develop an actual rapport marked by mutual trust and openness. A delicate balance exists in my relationship to the community—eight years has certainly allowed me to become a quasi-insider in the hamlet, but ultimately I am still an outsider who is unable to fully comprehend the values of the people and who has since left the community. By the end of my teaching career in Nunavut, I was one of two most senior teachers in the school. I had lived with the people for the better part of a decade and had forged a joint history with the community. We had traversed together the triumphs, tragedies, and the ebbs and flows of modern history for the community. The outsider side of the balance is best expressed through a community Elder who once told me, in a respectful way, that I could never be an Inuk because it is not in my blood. I could learn Inuktitut, hunting, and survival skills, but that will not change the fact that I am a *qablunaaq*. Furthermore, he said that despite the fact that he can speak English, he cannot be a *qablunaaq*. There are limits to the depth an insider outsider can reach within any community. I have undertaken this research with this understanding.

Chapter 1: Introduction

During the years of research undertaken for this study, the Truth and Reconciliation Commission of Canada's inquiry into the residential school system and its impact on Inuit and First Nations peoples has concluded, and its findings have been published in *Honouring the Truth, Reconciling the Future* (Truth and Reconciliation Commission of Canada [TRC], 2015). The study I have conducted hopes to contribute in some small way to the national quest for true reconciliation. It provides information that may be considered when answering the Commission's calls to action regarding education. The Commission asks the federal government to "develop joint strategies to eliminate educational gaps between Aboriginal and non-Aboriginal Canadians" (p. 320), to "improve education attainment levels and success rates," and to "develop culturally appropriate curricula" (p. 321). Furthermore, I hope this study will address what the Commission calls the most harmful impact of residential schools, "the loss of pride and self-respect for Aboriginal people, and the lack of respect that non-Aboriginal people have been raised to have for their Aboriginal neighbors" (p. vi). These ideas are placed front and centre as this study embarks.

The relationship between the Inuit, the outsider schoolteacher, and the education system is complex marked by a long and troubled history and by conflicting beliefs about what is important in education and learning. Becoming a part of this relationship shook many of my personal beliefs and continues to provoke questions about the nature of learning and the meaning of schooling. In this sense, the relationship has inspired and continues to inspire my own learning and both personal and professional changes.

These changes have led me to investigate further many of the circumstances I have witnessed in my teaching. The discrepancy between the approaches of the Inuit youth in school, including their level of commitment and engagement, and those associated with their gaming sessions was evident. As a gamer, I know the feelings of success and engagement that come from video games; subsequently, as a researcher, I have followed the research that provides evidence of the learning potential of these games (Gee, 2004b; Gee, 2007; Sanford & Hopper, 2009; Shaffer, Squire, Halverson, & Gee, 2004). If one does not *learn* the important facts and skills required in these games, it is impossible to succeed.

When I combined the voices of the youth, my experiences as a gamer, and this research, I began to ask the deeper questions that challenged the entrenched beliefs about Inuit learning that had bombarded me from the moment I accepted a teaching position in the North. This research, and the reflection undertaken as part of it, are my response to all those who expressed doubt about the Inuit and learning upon hearing of my intention to teach in the North.

Statement of the Problem

There is a significant discrepancy between what traditional schooling indicates about the capacity of Inuit youth to learn and what their engagement and success in video games would otherwise suggest about their learning capability. There is a crisis in the education system of the North (Clifton & Roberts, 1988; Philpott, Sharpe, & Neville, 2009; Rasmussen, Sherman, & Baydala, 2004), but blaming the Inuit has led to an avoidance of any substantial re-evaluation of schooling. It has instead led to a system

continually shaped by the cultural deficit theory (Aylward, 2007) and full of misinformation. The Inuit's failure in the school system is used as the only measure of the learning capability of the Inuit and all other successfully demonstrated learning has been disregard. This has fostered the Inuit's internalized oppression and the belief that they cannot learn as well as the *qablunaaq* of southern Canada.

My first year of teaching in Nunavut was full of learning opportunities, struggles, and surprises. When the year began, I was assigned a combined class of grade 8 and grade 9 with approximately 35 students. Several students were missing from my class in those first few weeks. One student was missing because of an accident that had kept him out of school for most of the first month. When he returned, I noticed his approach to schooling was more consistent with what I as a young teacher was expecting and what I thought a good student should be. He listened, asked questions, and contributed thoughts to the class. I thought that this student was bringing something useful to the classroom until I realized that his presence was actually causing a shift in how the rest of the class approached learning and even in how they felt about themselves in the classroom. This student had mixed ancestry, and in the eyes of the rest of the students it was his partial *qablunaaq* lineage that shaped his approach to schooling. I overheard statements from them such as "I am Inuk, I cannot learn these things," "He is only half Inuk; that is why he is smarter than us," and "If I were *qablunaaq* I would have no problem learning the things you are trying to teach us."

Instead of looking at the failure of the Inuit in a formal academic setting, it is important to focus on these other successes in order to emphasize that the "crisis," as it has been labelled, of formal schooling in the North is not inherent in Inuit cultural

identity. The educational system may be the most socially powerful measure of learning, but it is not the only or the most telling indicator. Inuit youth thrive in many aspects of their lives, yet their academic struggles are used to stereotype and, often, to pigeonhole Inuit as a group failing to succeed in the modern world.

Their successes, particularly in the gaming realm, have led to this study. These students are happily and successfully engaged in what has been researched and described as a profound learning activity (Gee, 2004b; Gee, 2007; Sanford & Hopper, 2009; Shaffer, Squire, Halverson & Gee, 2004).

Purpose of the Study

The purpose of this study is to examine the gaming practices of Inuit youth to determine what evidence of learning they demonstrate. It aims to investigate gaming as a successful learning activity in order to determine what, how, and why Inuit learn from video gaming and what elements of the practice encourage their strong self-efficacy beliefs regarding their ability to complete and excel at the activity.

The participants in this study exhibit a level of pride, persistence, engagement, motivation, and belief in their ability to successfully complete tasks in their interactions with video games that they do not demonstrate in their daily school lives. In fact, these participants believe in their abilities so profoundly that in many cases they start these games on the most difficult settings—a strategy often associated with adeptness at learning—and then work hard in order to prove their abilities to friends and family. If their gaming reveals pride, persistence, and intense belief in their own capability, and if learning is taking place, then an in-depth analysis of their gaming practices provide

positive examples of ability and learning for the Inuit youth. It could also suggest directions for further research into schooling practices and Inuit learning that are not grounded in deficit thinking.

With this purpose in mind, this study was designed to investigate the following research questions:

1) Are video games a technology of learning for Inuit youth? If so, what characteristics of learning can be identified through an investigation of successful Inuit gaming practices?

2) What factors inform and explain Inuit youth's engagement with video games? Can an understanding of these factors that reveal pre-existing strengths and knowledge be used by the education system in Nunavut so as to better address the needs of Inuit youth?

Scope of the Study

This study collected and analyzed data related to the successful gaming practices of most Inuit youth in one hamlet in Nunavut, Canada. This study examined evidence of learning and the roots of the enjoyment, motivation, and engagement Inuit youth find within video games. It analyzed what has been observed as a successful activity among the Inuit to contribute to the research (Gee, 2007) into the potential of video gaming for learning.

The study should not be construed as an argument for the use of games in northern schools. I instead argue that the video game *format* is a powerful tool that the Inuit could use in order to teach and learn. Despite concerns that technology is eroding Inuit culture, the Inuit are adept at using existing technology creatively to better suit their needs (Alia, 2010). Based on the findings of this research, I believe that the potential of a video game

created using Inuit values at its core, Inuit stories and skills as its context, and Inuktitut as its voice could be an incredibly valuable learning tool for modern Inuit students (Alexander, Adamson, Daborn, Houston, & Tootoo, 2009; Hall & Sanderville, 2009; Lameman, Lewis & Fragnito, 2010).

Rationale

As related earlier, there have been many calls, some recently (Schwartz, 2013), to address the crisis in Indigenous education. Having taught in an entirely Inuit-populated school, I observed that there are significant issues in the education system that point to a need for change. Beneath the metaphorical smoke of lower grades, fewer diplomas, and a lack of post-secondary interest and success there is fire. This fire comes for students whose default position upon entering a classroom is a belief that they cannot learn because of who they are and therefore refuse to engage with educational activities. They are aware of their abilities in some aspects of their lives, but these do not appear to hold much value within the school structure or curriculum—a significant problem in and of itself. It is perhaps as a result of this problem that, within the classroom, they have little to no faith in themselves.

A colonizing culture still dominates the school system in the North, with curriculum borrowed or moulded from education departments elsewhere that encourages and sustains these colonizing beliefs. So the students enter a building day after day with no apparent certainty that they can learn the all-important lessons the school system considers most important. The school can symbolize the internalized oppression the students appear to feel and can exude an unwelcoming culture with little understanding of

Inuit youth or their needs, strengths, knowledge, and desires. It can even devalue the lessons or activities where students exhibit self-confidence in their abilities by indicating that these activities are not as important as school. School sports activities, as an example of an activity that the youth thrive in and enjoy immensely, are used by teachers and administration as a bargaining chip that will be taken away if scholastic criteria are not met. This is similar to techniques outlined in Rosonna Tite's (2008) narrative describing her friend being cut from an all-star hockey team for failing an exam because teachers and administrators "seemed tied to the notion of the superiority of the competitive academic curriculum" (p. 82).

Research suggests that the educational "crisis" has much more to do with the conflict between the colonizing educational culture and the traditional Inuit culture, which struggles but remains strong in the community, than it has to do with the supposed inability of the Inuit youth (Berger & Ross Epp, 2006; Crago & Eriks-Brophy, 1994; Stairs, 1992). Video games are as much a product of dominant culture as the education system is, yet this study examines whether Inuit youth can learn from them with success, enjoyment and engagement. A major factor that distinguishes these two phenomena – the culture of gaming and the cultural politics of schooling - is the long, negative history of colonial education among the Inuit of northern Canada. The phenomenon of video games, though the result of powerful, persuasive marketing campaigns, has not been forced upon the youth of the hamlet in the same way that formal education has been. They have chosen to explore the medium of video games, chosen their methods of progression in the game, and chosen to continue to participate in it. There is a degree of choice involved in

gaming, whether it has to do with the gaming platform or genre, that has rarely been offered to Inuit in the education system since its development in the 1940s.

Theoretical Approach

Cultural studies research analyzes the influences that impact people as they construct their lives. It seeks "concepts with which to cut into the complexity of the real . . . to reveal and bring to light relationships and structures which cannot be visible to the naïve naked eye, relations of power and contradiction, of domination and struggle" (Grossberg, 1986, p. 63). In particular, this study uses the cultural politics of schooling and learning as a point of analysis. It acknowledges a hegemonic educational structure (Hall, David, & Kuan-Hsing, 1996) that sees cultures, the Inuit culture as well as the dominant southern culture, in conflict, struggling to gain position and influence in the learning taking place among the participants. Education and learning show how "the meaning and politics of any practice is . . . the product of . . . complex relations and contradictions within which it exists" (Grossberg, 1986, p. 64). This study operates with a lens of the ever-changing cultural politics of schooling and learning in the North, which demonstrates, as Stuart Hall notes, "the domain of cultural forms and activities as a constantly changing field . . . [look] at the relations which constantly structure this field into dominant and subordinate formations" (Hall, 1981, as cited in Grossberg, 1986, p. 71). The Inuit are undergoing, and have been since the first contact with "southerners," a constantly changing cultural form of learning and education. They have gone through periods where the Inuit were the dominant culture and utilized the educational methods of *isumaqsayuq* (see Definition of Terms, p.39), and then they have gone through the

opposite where they were the subordinate culture and were forced to endure *ilisayuq* (traditional European style of education – see Definition of Terms, p.39) in its worst form—the residential school system. This study finds the Inuit somewhere in between but still remaining in a position of oppression. The description of racialization states that "race has been used and is continually used to justify inequality and oppression of Aboriginal peoples" (St. Denis, 2007, p. 1071), and this study notes that racialization is prevalent in the education system as well.

I have observed inequality regarding different types of learning amongst Inuit youth. In my experience, most learning activities the Inuit youth have performed in have been successful ones. However, Inuit demonstrate a perceived deficit in formal education, which discredits their ability to learn. The Inuit might value these learning activities above all others, but as theirs is not the dominant culture, their success is not considered as important as their failures. In this study, Inuit youth provide their experiences and knowledge of the cultural phenomenon of video games, a successful learning activity, as well as their own understanding of how this activity is different from their formal educational experiences.

This study accepts and attempts to understand the various cultural identities that the participants maintain in their daily lives. A cultural identity helps to "understand ones' identity as a construction, a product, and an effect of social and historical relations" (St. Denis, 2007, p. 1070). This research recognizes the idea that the participants maintain different cultural identities with different histories—their identities as members of the community, as members of the gaming community, and as students in the southern education system.

James Paul Gee, an American professor and researcher who has worked in areas including psycholinguistics, discourse analysis, sociolinguistics, bilingual education, and literacy, offers valuable context for this study. Gee (2007) outlines 36 principles of gaming and learning that resonate with the principles outlined in the traditional Inuit educational approach known as *isumaqsayuq*. For example, in *isumaqsayuq*, all learning activities take place in a safe, risk-free environment surrounded by Elders and family, which is meant to allow the youth to try different methods as they attempt to solve problems. Gee (2007) labels this approach as "psychosocial moratorium" (p. 222) and notes that gamers are expected to try different solutions to issues knowing that there will be no real-world consequence if they fail in the game. Other points of resonance between Inuit traditional learning practices and the principles outlined by Gee will be developed later in the thesis.

In summary, this study is situated within cultural studies, in particular the cultural politics of schooling and learning, and relies on the Indigenous knowledge of *isumaqsayuq* and Gee's learning principles. These concepts are used to analyze the phenomenon of the proliferation of video game participation, engagement, and successful learning among Inuit youth.

Methodology

My research is an intrinsic, ethnographic case study that uses multiple forms of data, including questionnaires and semi-structured interviews. An intrinsic, ethnographic case study is an in-depth exploration of a bounded system where a cultural group's shared

patterns of behaviour and belief are investigated, and where the case itself and the researcher's own interest in the area are the main reasons for examination.

A major reason why I chose to conduct this type of study relates to what Creswell refers to as the extended amount of time spent with the culture-sharing group (Creswell, 2008). As a teacher in the community, I was in a unique position to see both Inuit learning abilities as displayed through the school system and the learning taking place in other areas of their lives. This study takes on an intrinsic form because I have strong beliefs regarding the importance of learning and education, I have gained a great deal of respect for the Inuit youth of Nunavut, and I am also a lifelong gamer. I have always attempted to advocate for the Inuit, the importance of learning, and the positive potential of video games and therefore have an interest in seeing what connection there is among the three. I am aware that this lends itself to researcher bias but these three components have had such a significant impact on my life that I am unsure of how I could remove the impact of it from my overall method of interpreting this research.

Ethical clearance was sought and obtained from the Interdisciplinary Committee on Ethics in Human Research (ICEHR) at Memorial University in St. John's, Newfoundland, and the Nunavut Research Institute located in Igloolik, Nunavut. All required ethical clearance was attained by December 2011. Public consultations were held for community members and high-school participants prior to research to outline the study's focus and parameters, and the participation levels required. Letters of consent were obtained from the District Education Authority (DEA), the school administration, the parents and guardians of all young people involved, and from the participants themselves. Participants were regularly informed, through dialogue and in writing, of the

division between their schooling and this research, and I conducted their interviews in a location where they felt comfortable.

This study began with the goal of obtaining responses from a significant portion of the high school students enrolled at the Nunavut school research site to gain an overall idea of the gaming practices of Inuit youth. 30 interested teenage youth from the school at the centre of the study completed questionnaires, consisting of both multiple-choice and written-response questions in either English or Inuktitut, depending on the participant's preference. After that, 10 participants were approached to conduct semi-structured follow-up interviews with the researcher. All of those asked to conduct these interviews agreed to take part, and appropriate interview times, outside school hours, were set up. Participants could choose the language of the semi-structured interviews, although all chose to conduct the interviews in English. I audio-recorded and transcribed the interviews and noted and documented other semiotic codes, such as body language and gestures.

In analyzing the data from the surveys and interviews, I extracted statements and themes relating to participants' learning of the rules and structures of the games, as well as their persistence, methods of progression and responses to successes while interacting with video games. I also accounted any indications of similarities or differences that occur in gaming as opposed to their daily exchanges in traditional academic settings.

Significance of the Research

This research begins in a hopeful place, one that recognizes and values multiple forms of Inuit learning. It challenges and provides alternatives to the prevailing idea that

the Inuit cannot learn or cannot learn well. It provides a positive portrait of a successful, modern-day Inuit youth culture that is an antidote to the dominant one. The research contributes to a discussion on Inuit learning that does not focus on grades and achievements alone but instead on a successful activity to determine how learning is taking place. This discussion provides the basis for a closer look at the traditional Inuit perspective, *isumaqsayuq*, to determine what can be gained from modern learning among the Inuit. Finally, this research contributes to an emerging body of research on the learning potential of video games.

Since the creation of Nunavut in 1999, there have been calls for change in Inuit schooling. It has been argued (Aylward, 2007; Philpott, Sharpe, & Neville, 2009; Smith, 2000) that there is a need for a better connection between the community and home lives of Inuit and the curriculum offered in schools. The *Inuit Qaujimajatuqangit* education framework (Government of Nunavut [GNU], 2007) outlines Nunavut's educational goals. This document states that "education in Nunavut is committed to an approach that emphasizes learning about learning and involves an emphasis on the learning process" (GNU, 2007, p. 57). This study will look at Inuit youth's taking part in activities where learning is occurring and motivation and engagement remain at high levels. An in-depth analysis of this activity would be of interest to the educational officials interested in the learning process among Inuit youth.

This research will add Inuit voices and experiences to the growing body of academic research on video games as a new literacy, their potential for educational purposes, and how learning happens through their usage (Gee, 2007; Shaffer, 2006; Squire & Barab, 2004; Prensky, 2001). Games provide participants with an active,

embodied learning experience that is far removed from the traditional understanding of learning. This traditional learning "separates complex tasks into simpler parts that can be learned with the amount of information reduced to manageable levels" (Sanford & Hopper, 2009, p. 1), with the learning separated from the main task and the participant separated from the intent of this task. The video game format provides many potential benefits for learning and literacy (Gee, 2007). One of these is the ability to provide an embodied experience to explore the facts and knowledge being presented to the participant in a virtual world. Shaffer, Squire, Halverson and Gee (2004) state that

> in game worlds, learning no longer means confronting words and symbols separated from the things those words and symbols are about in the first place . . . learners experience the concrete realities that words and symbols describe . . . learners can understand complex concepts without losing the connection between abstract ideas and the real problems they can be used to solve. (p. 4)

These ideas have not, to the best of my knowledge, been explored in relation to an Inuit population, and their voices and experiences will provide a new perspective on the potential of video games to provide a structure of learning for a variety of differing learner types.

By its very premise, this study challenges the colonial history of the education system in the North, as well as the practices framed in this colonial mindset that still exist today. These practices involve what curriculum is being taught, the backgrounds of those that teach it, and the proliferation of non-Inuit values that exist in the daily school interactions between the staff and the youth. Furthermore, the study will address the

myths that exist regarding the learning styles and abilities of the Inuit.

Limitations

One of the main limitations of the present study is its sample size. The research includes data from 30 high-school-age Inuit youth located in one hamlet in Nunavut, Canada. While this does represent a significant sample size for the youth of the hamlet, it is not necessarily transferable to other Inuit youth throughout the territory. Future research could be done in other hamlets, and perhaps in one of the major centres of Nunavut, in order to determine its significance.

Though all participants were offered the chance to complete the questionnaire and the interviews in the language of their choice, they all chose to use English as the language of participation. Particularly during the interview phase of data collection, I noted several times that participants struggled as they attempted to put their thoughts into English, though they seemed to have the answer in Inuktitut. Further research could be conducted where data is collected in Inuktitut to ensure the participants communicate what they are trying to say.

Additionally, there is a limitation in the amount of data collected in this study. The data collected is limited due to the short responses that often lack detailed descriptions. However, when the responses are combined, significant insights have emerged.

Definition of Terms

Some specialized terms recur throughout this study. These terms will be defined here in an introductory manner. All of these terms will receive further, more detailed explanation as we proceed through the research.

Isumaqsayuq: This is the Inuktitut word referring to the traditional Inuit methods of educating children prior to European contact. It refers to education that involves knowledge transfer through observing and imitating the daily activities of their family and the community as a whole (Stairs, 1992); the contextualized learning of skills within practical community tasks; teaching children through a process labelled "backwards chaining," which allows them to complete the final steps of adult tasks, giving them an immediate and important role in community work (Stairs, 1995); and the use of games, play, drama, or "interrogations" surrounded by the adults who care for them, ensuring the children's safety and protecting them from defeat as they grapple with these potentially momentous scenarios (Briggs, 1998).

Ilisayuq: This is the Inuktitut word that refers to the European system of education and schooling. The concept refers to education where knowledge is validated on the basis of expert opinions and places knowledge in abstract universal categories such as science or philosophy and then these categories are organized into hierarchies instead of being looked at in their own right (Stairs, 1995). The main goal of this abstract learning removed from the participants' daily life is the basis for a specialized occupation—not necessarily one that aids their home community.

Qallunaaq: This is the Inuktitut term used to describe a non-Inuit person; it usually refers to a White person. *Qallunaat* is the plural. The spelling that will be used is consistent with the dialect of a particular area of Nunavut.

Gaming (also video gaming, digital gaming): For the purpose of this study, the term *gaming* will refer to any digital gameplay regardless of platform used to interact with the games.

Gamer: A gamer in this study is someone who interacts with a digital game regularly on any platform. These platforms can include mobile (smartphones/tablets), console (Playstation/Xbox/Nintendo Wii), or personal computer (Windows/Mac computers).

Technology of learning: A technology of learning, for the purposes of this study, is a piece of hardware or software that enables learning to occur. This technology offers help, provides a good learning environment, and allows content to be successfully taught. It also takes a novel approach to learning and does not simply offer a digital version of pre-existing learning strategies.

Conclusion—Road Map

Given the research problem, purpose, and questions offered in this introduction, Chapter Two will contain a literature review that provides in-depth information pertaining to the importance of engagement and motivation in education and their potential impact

on Inuit youth, along with more detailed discussions on gaming and learning and the relationships between them. Additionally, it will look deeper into cultural studies and new, everyday literacies. Chapter Two will also pay significant attention to Inuit approaches to learning and the history of schooling in the North. Chapter Three will describe how and why this research took the form it did—an ethnographic case study. In Chapter Four, the reader will hear the voices of the youth as they outline their experiences playing digital video games and describe the learning processes contained within and what causes increased self-efficacy as they interact with them. Chapter Five will reveal and explore the themes found in the participants' experiences that will inform the research questions. Chapter Six will discuss potential conclusions, and implications for the educational experiences of these participants.

Chapter 2: Literature Review

In this chapter, I will present a literature review with three main foci: gaming and youth, gaming and Indigenous youth, and gaming and learning. The literature will outline the current debates about the benefits of gaming, its turbulent yet hopeful place within Indigenous cultures, and its significance to digitally literate youth and learning.

Cultural Studies

Raymond Williams (1958) believed that the word culture has two meanings. First, it represents a "whole way of life," as in the everyday life, and secondly, it refers to the forms of signification (novels, films, and video games as examples) that circulate within a society.

Many aspects of culture need to be analyzed within this study. There is the modern Inuit culture, changed from more than a century ago by the influx of southern culture in the North in the 1900s; there is the culture of schooling in which Inuit must participate; and there is popular culture, including the culture of video games and gaming, in which Inuit youth participate. These elements are not discrete; they overlap within the culture that each of the youth in this study inhabits.

Traditional, pre-European-contact cultural elements play a small part in contemporary Inuit culture and struggle for relevance to contemporary Inuit youth. Aspects of southern culture—the language, the rhythm and style of hip-hop music, participatory media such as the Internet, or television with its predominant southern values—are a part of modern Inuit culture. The southern construct of schooling continues to interject values and beliefs that were not present in earlier Inuit culture into the daily

lives of Inuit youth. When they return home from school, the southern techno-scientific construct of gaming contributes to their cultural experience. Each youth interacts differently with these aspects of what is now their culture, and that culture is an incredibly difficult thing both to manoeuvre and to explain. The cultures of the Inuit, schooling, and gaming are not separate entities but intertwined parts of a culture that all participants, including the researcher, experience and use to form their own personal cultural beliefs and values.

Couldry (2000) states that, within cultural studies, culture is thought of "in relation to issues of power, the power relations . . . which affect who is represented and how, who speaks and who is silent, what counts as 'culture' and what does not" (p. 2). This research requires that Couldry's cultural studies questions be asked often in relation to the culture of Inuit youth. However, at the heart of this study is the impact of two southern cultural constructs on Inuit youth.

On one hand, there is the formal education framework put in place in Arctic Canada during the 1940s. This educational framework includes a long history of assimilationist policies, residential schools, and other impositions on and violations of Inuit culture. This history has led to a formal educational experience that is characterized by disengagement, apathy, and a lack of self-efficacy in academic pursuits (McGregor, 2010). On the other hand, there is the phenomenon of video gaming, which has found its way into the lives of many Inuit youth. It appears that engagement with these games can lead to experiences where youth are invested, engaged, challenged, and confident. By analyzing the phenomenon of gaming through a cultural studies framework, we gain

some understanding of gaming in the lives of Inuit youth and why it appears to produce such different outcomes than formal education**.**

Gaming and Youth: Review of Literature

Gaming through a cultural studies lens

Shaw (2010) argued that "scholars that do approach video games through the lens of culture should adopt the same critical and reflective approaches to culture that cultural studies has" (p. 404). Marvin (1988) stated that the "early history of electronic media [is] a series of arenas for negotiating issues crucial to the conduct of social life; among them, who is inside and outside, who may speak, who may not, and who has authority and may be believed" (p. 4).

There has been debate about whether to look at video games *as* culture (Winkler, 2006) as opposed to video games *in* culture. I agree with the argument for the latter of Shaw (2010), who stated that "video games permeate education, mobile technologies, museum displays, social functions, family interactions, and workplaces. They are played by many if not all ages, genders, sexualities, religions, and nationalities" (p. 416). These games have been approached as both cultural artifacts (McAllister, 2004) and as cultural practices (Roig, San Corenelio, Aredevol, Alsina, & Pages, 2009). Looking at gaming as cultural practice would "imply not only attending to video game consumption (or the practice of playing games) but also how it is socially organized" (Roig et al., 2009, p. 91).

Gaming and youth

Gaming has become a powerful industry and one that mainly targets youth. According to the Entertainment Software Association of Canada [ESAC], in 2013, 90% of children between ages 6 and 17 were gamers, with "gamer" meaning someone who has played video games in the last four weeks (ESAC, 2013). Such a large industry attests to a powerful cultural impact that attracts a great deal of research on the connection between gaming and youth.

Motivations

The motivations of children to play video games provide a better idea of the identity of a gamer than does the stereotypical socially limited and isolated gamer profile often used in media gaming stories (Lenhart et al., 2008). Przybylski and Rigby (2010) found that the motivations for gameplay were found in the capacity of gaming to satisfy basic psychological needs in areas such as competence (the need to have fun and succeed), autonomy (the semblance of control), and socialization (youth connect socially through gameplay). This view presents gaming not as something that is *done* to youth per se but is instead internally motivated and chosen to fulfill important needs (Ferguson & Olson, 2013).

Ferguson and Olson (2013) conducted a large study of grade 7 and 8 American students regarding their motivations for playing video games. They note that youth were motivated by the fun/challenge of the games, the ability to gain catharsis and autonomy from the gameplay, and the feeling of social connection.

Potential benefits

Despite being far outweighed by the research on potential negative consequences of gameplay for youth, research investigating the potential benefits of digital gaming reveals promise associated with this sometimes maligned practice. While it is important to consider the valuable research conducted in areas of increased aggression, hostility, and addiction through video games, it is as important to consider the potential benefits "because the nature of these games has changed dramatically in the last decade, becoming increasingly complex, diverse, realistic, and social in nature" (Granic, Lobel, & Engels, 2014, p. 66). These benefits are often divided into four domains: cognitive, motivational, emotional, and social (Granic et al., 2014). Additionally, each of these domains converses to have a potentially positive impact on learning (Gee, 2007; Shaffer, 2006), which I will address later in this review.

Research has shown that video games promote a variety of cognitive skills, which often depend on the type of games being played. Research into the often demonized (Montag et al., 2011) "first person shooter" games often reports faster, more accurate focus and higher spatial resolution in visual processing, along with enhanced mental rotation abilities (Green & Bavelier, 2012). These benefits appear to last for extended periods and can be transferred to other tasks in the real world (Uttal et al., 2013). Regardless of genres, games appear to help youth develop excellent problem-solving skills (Prensky, 2012) by providing little guidance in solving a problem but giving players a huge range of avenues for tackling it. Studies have also found a positive association between the games and creativity (Jackson et al., 2012).

With the sheer success of the gaming industry, it is not hard to see that game designers are incredibly good at keeping players interested in their products. While immersed in these game worlds, youth are taught an essential lesson: persistence while enduring hardships and failure can lead to valued rewards (Ventura, Shute & Zhao, 2013). Taking a different approach from that taken in school, players respond to adversity with excitement and interest (Salminen & Ravaja, 2008) while remaining relentlessly optimistic about their chances of attaining their goals (McGonigal, 2011). This type of optimism could provide game players with lasting academic success (Ventura et al., 2013) if these skills are proven to be transferable to other worlds, such as the worlds of school and work.

There is evidence that video games can prove emotionally beneficial to the youth that engage in them. Studies note correlations between gameplay involving a player's favourite games and improved mood and increased positive emotions (Russoniello, O'Brien, & Parks, 2009). Puzzle games appear to improve the mood of the player, increase relaxation, and lessen certain anxieties they may be dealing with (Russoniello et al., 2009). Jane McGonigal (2011) in her book *Reality is Broken* suggests that intense positive emotional experiences can emerge from gameplay sessions. Additionally, it has been suggested that "game playing may promote the ability to flexibly and efficiently reappraise emotional experiences, teaching players the benefits of dealing with frustration and anxiety in adaptive ways" (Granic, Lobel, & Engels, 2014, p. 72).

Finally, it is important to look at the social benefits of gameplay. The idea of the stereotypical gamer as an isolated, socially inept loner was first established in the 1980s but has been shown as clichéd and not a balanced representation of the majority of

gamers (Lenhart et al., 2008). Current games focus more on the social aspect of gaming, be it online multiplayer, entire game worlds inhabited by millions of players from around the world, broadcasting gameplay and chatting live with viewers from around the world, or the traditional living room full of friends and family playing the same game. In fact, 62% of gameplay sessions of children and adolescents involve playing socially, online or in person, with friends (ESA, 2012). These contemporary gamers are learning social skills and pro-social behaviours (Gentile & Gentile, 2008). In games focused on cooperative gameplay (Ewoldson et al., 2012), players were found to gain both short and long term effects on helping behaviours in the real world (Granic, Lobel, & Engels, 2013). These types of benefits could even be found in violent video games when the games are focused more on cooperative gameplay as opposed to competitive based gameplay (Ferguson & Garza, 2011).

Participatory Media and Indigenous Peoples

The influx of technology among Indigenous peoples has been the focus of a great deal of criticism. The emergence of the dominant culture through radio stations, television channels, music, computers, the Internet, and mobile devices has been touted as a potential example of further colonization by the dominant culture, resulting in the further erosion of Indigenous values, languages, and worldviews (Landzelius, 2006). The situation, however, is more complex. This result only occurs if the Indigenous peoples are solely *passive* consumers of the media. Of course, not all people who interact with technologies are active consumers, and education through schooling has not met its responsibilities to develop critical media literacy learning. There is indeed an impact of

American and Canadian popular culture on young Aboriginal people. Many Indigenous youth, like many young people, mimic the dress of hip-hop artists, watch *Much Music*, and spend countless hours playing video games (Hall & Sanderville, 2009).

It has been said that while it would be difficult to remove these various types of media, perhaps removal is not the best option. If these mediums are all being used extensively by Aboriginal youth, it would appear these technologies could prove to be a logical vehicle preserving traditional knowledge and languages (Hall & Sanderville, 2009). In today's digital culture, Indigenous peoples around the world are using radio, television, print, and the Internet to increase the volume of their voice and to extend the range of their reception among non-Indigenous peoples (Aila, 2010). When interacting with digital games, the players also become part of the content and therefore become emblematic of the participatory media culture that exists today (Squire, 2011). As Inuit journalist Rachel Qiksualik stated, "Inuit are nomads . . . [and] rejoice in the ability to compare opinions abroad, as they did when travelling at will . . . the hamlet is the new iglu, and the internet is the new Land" (Aila, 1999, p. 114).

Gaming and Indigenous Peoples

The mainstream gaming industry often appears to operate at the whim of large corporations with decisions made to maximize profit, reach more players, and, often, in what seems to be an effort to not rock the boat, maintain dominance. This is true of their stereotypical treatment of Indigenous peoples from around the world. As Elizabeth LaPensee (2009) stated on the website *Aboriginal Territories in Cyberspace*, "in commercial video games, Indigenous peoples are stereotyped and appropriated—at worst,

they're killed for points; at best, they're the half breed hero . . . the 'keeper' or 'protector' of his people, but who are his 'people'?" Though Indigenous youth are known to be avid game players, they do not often appear in the games and when they do are often misrepresented. Dillon (as cited in Lameman & Lewis, 2011) communicated that "when Indigenous characters are playable they are stereotypical and where they are side characters, they are targets of violence" (para. 6).

Canadian actor Gary Farmer has spoken on his concerns about these stereotypes, their prevalence in media, and how the false portrayals will affect Indigenous youth: "Consider the impression left when they see themselves portrayed this way time and time again. It's hard for them to have a positive image of themselves" (Media Smarts, para. 4). Since "attitudes, values and self esteem are well developed by mid teen years, or even earlier" (Media Smarts, para. 5), the Inuit youth involved in this research are particularly vulnerable to this aspect of gaming. This and similar concerns have led to a growing number of projects involving the creation of video games by and for Indigenous peoples from around the world.

A major issue within the game industry is that no matter what the intentions are, "a game inevitably reflects the culture in which it is created" (Gee as cited in Kardan, 2006, p. 91). To counter the industry's portrayal of Indigenous peoples, a number of projects, both academic and entertainment focused, are being created by and for these groups. These projects are being conducted to preserve language and culture (Karden, 2006), to encourage First Nations youth to be active and critical participants in media such as video games, to correct the representations of Indigenous peoples in commercial games (Lameman & Lewis, 2011), to bring together Indigenous teenagers and Elders

through game creation and consumption (Lewis & Fragnito, 2005), and to enhance the learning experiences of Indigenous youth (Anderson, 2007; Anderson & Courtney, 2011; Jorgensen & Lowrie, 2013).

One of the pioneers of the movement to utilize gaming as a method for teaching youth about their traditional culture and language is Kaveh Kardan. Kardan (2006) developed a game entitled *Ohana* which is a "small, single player *World of Warcraft*, set in a pre-contact Hawaiian village" (Kardan, 2006, p. 91). He feels that digital games, particularly those of the role-playing game [RPG] genre, are immersive and allow the player to be a participant in the culture of the game as opposed to an outside observer. The players can be immersed in a world, culture, and possibly a language that is not their own. His aim with *Ohana* was to develop a game where the content of the game was also the educational content. A study by Yunkaporta and McGinty (2009) argues that learning through culture is better than learning about culture. Kardan (2006) noticed that the technology was readily available to allow this to happen without having to physically immerse students in a culture—which, in the case of pre-contact Hawaiian society, no longer existed. Anderson (2007) furthers this by saying that "a strong argument can be made that learning about another culture in context and through action may lead to student engagement in deeper and more meaningful knowledge building than many traditional models that push students towards rote learning" (p. 9).

Kardan (2006) looked below the surface appearance of the graphics and content. He looked to the heart of the medium—the game engines (software frameworks for the development of video games)—which were still developed by the same developers who were producing the misrepresentation of Indigenous peoples in games. As Christie (2004)

stated, these and other information communication technology (ICT) tools "are not innocent objects. They carry with them particularly culturally and historically contingent assumptions about the nature of the world, and the nature of knowledge; what it is, and how it can be preserved and renewed" (p. 1). Zenan (2011) elaborated by saying that such a game system "embeds Western epistemology within its framework of game development" (p. 10). In order to develop a culturally pure game, Kardan (2006) created his own game engine, as did the Interaction Design (ACID) group who created the torque engine specifically to aid in the creation of interactive designs to tell traditional stories.

Liu Zenan's 2011 study, *Revitalizing Culture Through Gameplay*, claimed that "the gaming experience for Aboriginal children is inevitably influenced by Western knowledge practices" (p. 10). Zenan's project, entitled *Digital Songlines Environment (DSE),* created a virtual-reality game system aimed at preserving and promoting Australian Aboriginal heritage, arts, and culture with a realistic virtual landscape. However, according to Zenan (2011), the goal of the project was not reached because the game engine came straight from the "Western techno-scientific cultural tradition" (p. 13) of the commercial game industry. The existing game engine chose the dominant culture's ways of knowledge as its default position, meaning ways of knowledge possession and dispersion were forgotten, which led to slight changes in cultural identity for players. Furthermore, Zenan expressed that the main player's avatar may possess the correct skin tone and wardrobe but in fact is positioned by the game as an explorer or outsider looking into the culture, as opposed to being immersed in it as an active participant.

There have been some interesting thoughts put forward regarding why the gaming medium could be useful as an educational tool, not just for culture and language, but for all formal learning experiences Indigenous youth encounter in schools. Jorgensen and Lowrie (2011) note that starkly different cultures exist between Indigenous peoples, in the case of their study of the Aboriginal peoples of Australia, and those that create and run the formal educational institutions, in terms of belief systems, patterns of communication, and views on science, spirituality, and logical thinking. As they put it, "as culture shapes ways of seeing and acting in the social world, it is not surprising that there are many differences between the views of Aboriginal students and those represented in and through the school curriculum" (p. 131). Due to these misaligned views on many aspects of knowing and learning between the school and at home, there are many opportunities for resistance where students fail to engage with the curriculum.

Jorgensen and Lowrie (2011) argue that gaming could actually provide a new curriculum space where Indigenous students are able to access southern ways of knowing in a way that bridges the cultural divide while also allowing the incorporation of Aboriginal ways of learning and knowledge. In their particular study, they utilized the game *Guitar Heroes* and used the Rich Task Process, which drew in many different areas of curriculum in order to demonstrate validity and relevance to the content being learned. The study proved successful with students engaged, motivated, able to watch, and able to participate through observation while limiting the aggression students often demonstrated in class. The youth collaborated more with their peers and their learning extended to areas of literacy, numeracy, and musical performance.

Anderson (2007) writes that it is necessary to unpack gaming and how it might "work in the lives of indigenous learners to mediate tensions between learning that is 'doable' and learning that is 'frustrating' . . . between learning that values a cycle of community expertise, and one that undermines it" (p. 7).

Jorgensen and Lowrie (2011) argue that the game used in their research created a "third space," which they described as "a new space that builds bridges between the two diverse cultural spaces" and allows a "new educational space" where students are able to "enjoy successes in a new community" (p. 140). They also tie this success to Gee's principles of learning and state that his principles would have "particular value in contexts where students may disengage with learning" (p. 134).

There is a significant community working to teach Indigenous youth how to program their own games with the hope that a greater Indigenous presence in the industry will lead to a more authentic representation in games. This is one of the main goals of the Skins project, which hopes that Indigenous youth will become creators who can approach games with a critical perspective and through their own cultural ways of knowing (Lameman & Lewis, 2011). Students in these workshops "developed interactive environments based on traditional stories from the community in a process that required them to reflect on how they knew those stories, who had told them, and which stories were appropriate for such remediation" (Lameman, Lewis, & Fragnito, 2010, p. 1).

The Skins workshops utilize *modding*, which is a process of modifying existing game worlds and game engines as opposed to developing their own game engines from scratch. Although Kardan (2006) would probably disagree with this method, those organizing the workshop explain that the benefits of reduced time and cost still allow

students to adapt a complex system and critically reflect on commercial games. This is a great start for Indigenous youth in gaming (Lameman & Lewis, 2011). One version of this workshop saw collaboration between Mohawk teenagers and tribal Elders from the Kahnawake First Nation in Quebec in which the youth interview the Elders and then use their new programming knowledge to build virtual, navigable spaces to represent and illustrate their stories (Lameman, Lewis & Fragnito, 2010). Other than the benefits of direct teaching from Elders and helping to preserve Indigenous knowledge, Anderson and Courtney (2011) note that "indigenous students using indigenous knowledge in video game creation" can develop "a sense that their culture is valued in formal school settings" (p. 816). Furthermore, as game writer and academic Beth Dillon states, "What we need are characters with individuality to identify with and be proud of, with game mechanics that are capable of reflecting aboriginal thinking" (Lavigne, 2009, p. 4).

There is a growing body of work that examines the potential for gameplay and game creation for Indigenous youth that focuses on culture and language preservation, looks to improve engagement and understanding in learning, and seeks to provide a more authentic representation of Indigenous people and to help give Indigenous youth pride in their cultures. Each of the projects mentioned in this review shows why the current research is important and where it could fit among existing studies. Despite all of these projects, there has not been much research or action in the area of Inuit and gameplay.

One exception is the development of a small gaming studio, Pinnguaq (Oliver, 2016), which has been formed in Nunavut in recent years and has aims similar to the above projects. On their website they note, "At the root of Pinnguaq is a respect and care for the rich languages and cultures that make up this planet. Pinnguaq was created out of

a desire to see strong programming available in Inuktitut, the Inuit language, and it roots itself in that mission as it moves forward" (Oliver, 2016).

At its beginning, the company worked to translate existing mobile games into Inuktitut and it has since developed several games aimed at preserving Inuit songs and legends as well as teaching Inuktitut. Pinnguaq has also overseen the development of the Pangnirtung Code Club, "introducing the youth of Pangnirtung to computer programming, making games and 'how computers think'" (Oliver, 2016). The idea of Pinnguaq and the ideas expressed in this research could work together improving learning opportunities for Inuit youth.

Gaming and Learning

In response to the belief that certain groups of poor children were unable to learn, Maria Montessori developed a theory in her 1936 work, *The Secret of Childhood*, that all children could learn in the right environment. As related earlier, gaming has been seen as a medium where each player could potentially find their own environment for learning—a "third space" where students are able to enjoy successes in an environment that bridges two diverse cultural identities. These game environments have accommodations built in from the beginning of the game, when a player is able to choose a difficulty setting based on previous experience and comfort level with the gameplay. Most games provide ample feedback, the ability to utilize hint systems, and an in-game tutorial that allows a player to complete the first stages of the game with elevated help from the computer or console. Furthermore, the testing that occurs within these games is developmental for the learner as opposed to being evaluative judgments carried out by an authority figure such as those

seen in school (Gee, 2004a). All of these accommodations work to ensure that most players are able to learn the appropriate content, the rules of the game, and therefore obtain success throughout the gameplay. It was said earlier in this chapter that gaming hopes to provide effective learning spaces for Indigenous youth. Games have also been studied as potential learning tools for students with varying learning disabilities ranging from ADHD (Dielmann & Meaux, 2010) to autism (Silton & D'Allesandro, 2010) to sensory impairments (Brown, Standen, Evett, Battersby, & Shopland, 2010).

Abrams (2010), while studying the game playing habits of middle-school students, found that the participants played video games that not only represented their personal interests, but also validated their desires and empowered them with the freedom to experiment with identities, decisions, and actions they might have longed for in reality (p. 84). These gamers experienced through their gameplay a competence they felt they did not regularly achieve in their daily lives. Players do not just engage in ready-made gameplay, but also actively take part in the construction of the experiences; they bring their desires, anticipations, and previous experiences with them, and interpret and reflect the experience in that light (De Castell & Jenson, 2007, p. 38).

As James P. Gee attempted to play through his first video game, he realized that success in the game required him to think and learn in a way he was unfamiliar with. He found the games to be long, hard, challenging, and "pleasantly frustrating" (Gee, 2007, p. 3). As Gee stated regarding the difficulty of the game, "you cannot play a game if you cannot learn it. If no one plays a game, it does not sell" (p. 3). He compared the learning taking place in modern educational settings to that taking place within these games, noting that "the theory of learning in good video games is close to what I believe are the

best learning theories of cognitive science . . . [and] fits better with the modern, high-tech, global world today's children and teenagers live in than do the theories (and practices) of learning that they sometimes see in school" (Gee, 2007, pp. 4–5). According to Gee (2004b), good game designers have "hit on profoundly good methods of getting people to learn and to enjoy learning" (p. 15) and these designers "are practical theoreticians of learning, since what makes games deep is that players are exercising their learning muscles, though often without knowing it and without having to pay overt attention to the matter" (p. 16).

From these initial experiences, Gee's (2007) research led to his description of 36 learning principles that are present in good video games, which were outlined in thematic chapters dealing with semiotic understanding, identity and competence, situated learning, telling and doing, cultural learning, and social learning. Gee also outlined three new areas of research with regards to learning: situated cognition—human learning is not just inside the mind of a person but is instead "fully embedded in a material, social and cultural world" (Gee, 2007, p. 9); new literacy studies—"reading and writing should not be viewed only as mental achievements . . . but also as social and cultural practices with economic, historical, and political implications" (Gee, 2007, p. 9); and connectionism—humans think best when they reason on the basis of patterns they have picked up through their actual experiences, as opposed to reasoning via logic and general abstract principles detached from said experiences (Gee, 2007). These principles and the three areas of learning research explicitly noted by Gee provide strong reasoning for his presence in the present research.

Gee's (2004b) work continues to focus on these principles and how they could be applied to the K-12 classroom, although he deems their application unlikely given "the current trend for skill-and-drill, scripted instruction, and standardized multiple choice testing" (p. 3). Additionally, he argues that successful games excel at challenging players, motivating their players to persevere while simultaneously teaching players how to play. Gee states that a good education involves "applying the fruitful principles of learning that good game designers have hit on, whether or not we use a game as a carrier of these principles" (p. 6). He believes that these principles are "particularly important for so-called 'at risk' learners, students who have come to school under-prepared, who have fallen behind, or who have little support for school-based literacy and language skills outside of school" (p. 4).

Gee's groundbreaking research began a "long overdue discussion about video games and learning in the academic and public arena" (Peppler & Kafai, 2007, p. 1). Studies have found evidence of learning and academic benefit through game participation (Gee, 2007; Papastergiou, 2009; Shaffer, 2006; Squire, 2003). Whitton (2012) said "games and playful spaces can encapsulate a wide variety of learning theories" (p. 10). which include constructivism (the idea that learning is active and learners construct their own knowledge through active engagement); experiential learning (the idea that students learn better through their own experiences and through forming their meanings and understandings from these experiences); collaborative learning (the idea of learners working together and sharing ideas); and inquiry-based learning (student-led problem solving and investigations) (Whitton, 2010). Squire (2011) drew a direct connection between the design elements in gaming and the principles incorporated in Montessori

schools. Ideas such as youth being guided through a cycle of discovery while perceiving patterns and relationships through cycles of action, observation, and feedback, and experiencing the "push back on understandings in a self-correcting way as learners strategize, fail and revise" (Squire, p. 57) form the basis of both Montessori and gaming structures.

Advocates of the potential of video games have called attention to the educative power of games as they integrate thinking, social interaction, and technology into the learning experience (Kahne, Middaugh, & Evans, 2009). Papastergiou (2009) asserted that video games have the potential to be powerful learning environments for many reasons: they can support multi-sensory, active, experiential, problem-based learning; they favour activation of prior knowledge, given that players must use previously obtained information in order to advance; and they provide immediate feedback, enabling players to test hypotheses and learn from their actions. The elements video games offer that affect learning the most are their use of adequate and adaptive feedback and of cognitive strategies such as rehearsal, paraphrasing, and repetition, along with animated graphics, increasing achievement, and decreasing task duration (Rosas et al., 2003).

As expressed by many researchers (Gee, 2007; Rosas et al., 2003; Squire, 2011), the feedback systems effectively utilized in video games could prove to be an important part of gaming's potential for deeper learning. Games often provide what is known as coaching guidance, which helps learners through their tasks and provides advice of various levels of detail along the way. This feedback in video games is immediate and provides the "just in time" (Gee, 2007) information required to solve the challenges the game presents. Games, therefore, can provide a specific learning environment where

guidance and feedback for the learners, along with carefully structured situations, are created in the hopes of helping the learner become proficient in the required skills for the game (Guralink & Levy, 2010).

By balancing academic content, legitimate peripheral participation, background narratives, and rules, the game worlds can be applied to academic learning areas such as science, social studies, and civics (Barab, Ingram-Goble, & Warren, 2008). Gaming is also uniquely suited to the accommodations of complex and diverse approaches to learning (Lainema & Saarinen, 2010). Green and McNeese (2011) outline a list of the benefits of using gaming for learning: customizable learning, users' control of their own learning, excitement-generated curiosity and motivation, social participatory problem solving, scaffolding, a sense of accomplishment, safe simulations, critical thinking skill building, media literacy, and experiencing cause and effect first-hand. Squire (2011) notes that, in order to be considered good educational experiences, games need to incorporate many guidelines such as employing academic knowledge as a tool for achieving goals, lending themselves to systemic understandings, offering multiple ways to play, encouraging social interactions of different forms that can lead to productive practices, and inspiring creativity with smooth ramps from users of content to producers. Studies have continued to discuss the new cognitive abilities being developed through digital natives playing video games (Klopher, Osterweil, Groff & Haas, 2009). These developing skills include the ability to process information quickly and in parallel from a range of different sources, along with a tendency to access information first through imagery and then utilizing text to clarify, expand, and explore (Facer, 2003, cited in Klopher, Osterweil, Groff & Haas, 2009).

While they are fewer than the studies that outline why gaming could theoretically provide effective learning environments, some studies do demonstrate the positive academic learning exhibited in classrooms utilizing video games in their lessons. Chuang and Chen's (2009) study determined games were more effective in facilitating third graders' average learning outcome than text-based computer-assisted instruction. Papastergiou's (2009) study concluded that high school students utilizing game-based learning in science instruction performed significantly higher than those students receiving non-gaming instruction on the same module. Ke & Grabowski (2007) found that there was improved achievement in the math learning with digital gaming as opposed to the no-gaming traditional approach. A study on the use of *Civilization III* in teaching world history reported of students who had previously failed history finding success by constructing and enacting identities within the games (Squire & Barab, 2004). A further study was conducted among students in economically disadvantaged schools in Chile. This study determined that the video games allowed for better performance in algebra, increased reading comprehension, spelling, and decoding of grammar (Rosas et al., 2003). A study conducted by Svarovsky and Shaffer among a group of disadvantaged American students using a physics-based video game had similar results. After using the game, the researchers found that the students used scientific justifications approximately five times as much than they did prior to gameplay. Furthermore, the students attempted their physics-based constructions within the game numerous times, watched each simulation attempt to walk, and then analyzed what caused the ineffectiveness of their design. They continued these attempts until they figured out what had to be done to have their creations move about the screen without falling down (Svarovsky & Shaffer, 2006). Studies have

also determined that video games prove effective in improving students' critical thinking and higher-level cognition (Chuang & Chen, 2009).

This study has many facets, which has meant that a large number of resources have been consulted. The literature review covered a wide range of topics related to cultural studies; the motivations and benefits of gaming for youth; the impact of participatory media, in particular video games, on Indigenous peoples; and gaming and learning. The next chapter will explain the process and procedures utilized in the methodology of the study.

Chapter 3: Methodology

The purpose of this study is to investigate the gaming practices of Inuit youth in order to determine what evidence of learning they demonstrate; what, how, and why Inuit learn from gaming; and what elements promote strong self-efficacy beliefs among the Inuit. This study utilizes multiple forms of data, including questionnaires and semi-structured interviews, to describe participants' experiences with video games while exploring their insights and beliefs regarding the activity. The study further aims to answer the following research questions:

1. Are video games a technology of learning for Inuit youth? If so, what characteristics of learning can be identified through an investigation of successful Inuit gaming practices?
2. What factors inform and explain Inuit youth's engagement with video games? Can an understanding of these factors, which reveal pre-existing strengths and knowledge, be used by the education system in Nunavut, so as to better address the needs of Inuit youth?

This chapter will include discussion of the research methodology and design. The participant selection process and relationship to the researcher will be identified, and the instrumentation or measures to be used in the study will be outlined. Further data collection procedures, and ethical assurances will be presented.

Research Methods and Design

This study examines the gaming experiences of a group of Inuit youth from Nunavut and the extent to which learning characteristics and self-efficacy beliefs in gameplay affect the level of player engagement with the games.

As described by Reeves, Kuper, and Hodges (2008), "the central aim of ethnography is to provide rich, holistic insights into people's views and actions, as well as the nature of the location they inhabit, through the collection of detailed observations and interviews" (p. 512) with "a strong emphasis on exploring the nature of a particular social phenomenon" (p. 513). The ethnography of this study is the description, analysis, and interpretation of the shared experiences of Inuit high school youth in one community as they interact with the social phenomenon of video games.

A central element to ethnographic work is that of reflexivity—the relationship the researcher shares with those who participate in the research. The researcher must disclose the relationship between researcher and participants and any ethical issues that flow from this relationship (Reeves et al., 2008, p. 514). It is important that "ethnographers . . . position themselves within their report and identify their standpoint or point of view" (Denzin as cited in Creswell, 2008, p. 485). The preface of this study detailed the biases I entered the community and school with. Because of my history within the community, I was able to "build a detailed record of their behaviors and beliefs over time" (Creswell, 2008, p. 473). My relationship with the youth, as well as with their parents and the community Elders, was a reason why I was able to obtain the amount of information from the participants that I did.

The amount of original thought on gaming, its impact, and its benefits, was remarkable given the youths' instinct to remain quiet in fear their answers might be wrong (Pauktuutit Inuit Women's Association, 2006). I saw the youth take part in research studies—facilitated by researchers that flew in and out of the community within a week—where the majority of the youth remained quiet and gave no real answers. There are certainly ethical concerns that had to be addressed because I was a teacher of the participants, but the positive effect of the relationship on the information gathered, along with my experiences in the community, were invaluable to the present research.

Research Ethics

Any research to be conducted by an outsider among an Indigenous population requires a great deal of planning and permissions before any data collection can take place. Having close contact with the community does not alleviate the potential harm and numerous imbalances of power that exist. These include issues of White privilege (Goodburn, 1999; Potapchuk, 2005; Solomon, Portelli, Daniel, & Campbell, 2005) and dual roles of researcher and teacher, which may lead to concerns among students of academic reprisal (Hammack, 1997; Mohr, 2001; Nolen & Vander Putten, 2007).

The present study required nearly six months of planning and obtaining the required permissions from various organizations before any research could take place. The study required that ethical clearance be obtained from the Interdisciplinary Committee on Ethics in Human Research (ICEHR) located at Memorial University as well as from the Nunavut Research Institute located in Iqaluit, Nunavut. The ICEHR required in-depth planning of how all aspects of conducting research among the Inuit

people—including respect for Inuit governing authorities, respect of community customs and codes of practice, and recognition of the role of Elders, among others—would be addressed. This ethical clearance was required before I could proceed with the Nunavut Research Institute (NRI) authorization. The NRI required a full non-technical summary and the ethical authorization from Memorial University, as well as authorization from the local District Education Authority (DEA), the school district, and the school administration itself. Furthermore, they required an indication of the potential regional benefits as well as any traditional knowledge component of the research.

Public consultations were held for community members and Inuit youth prior to research to outline the study's focus and parameters, and the participation levels required. These consultations were held on weeknights at the school, as this was the location chosen for all community gatherings and presentations and the timing was more convenient for all community members. These presentations led to letters of consent being obtained from the DEA, the school administration, the parents and guardians of all involved, and from the participants themselves. Participants who were below the age of 18 were required to give both an indication of their desire to participate in the study and their parent's or guardian's consent to allow them to take part. If above the age of 19, participants were permitted to give their own consent. Due to the closeness of the study to the school, participants (and their parents or guardians) were regularly informed, through dialogue and in writing, of the division between their schooling and this research. They understood that no compensation would be given, academically or otherwise, for their participation, nor would there be any adverse effects on their academic careers. Participants were informed at the start of their right to withdraw from the study at any

time and that there was no obligation, personally or academically, to complete the survey or conduct the interview if requested.

As research was being conducted in a community where Inuktitut was the primary language and English was the second, all documents relating to the study were offered in both languages, a translator was present for all public consultations, and the participants were able to complete their questionnaires and interviews in the language of their choice. All answers provided by respondents were kept as confidential information, and those who did complete the questionnaire as well as those who also took part in the interviews were guaranteed anonymity. This same degree of anonymity has been kept for the school and the community that is the site of this study.

Participants

The study population consisted of a sample of Inuit high school students in one school in Nunavut. These participants were chosen based on their interest in the research and their self-identification as gamers. Specifically, the study's participants were 30 Inuit youth, aged 14 to 20, who have had shared experiences with video games and who felt that time spent playing these games was beneficial and not wasted. The youth were all students attending school regularly and were given the opportunity to take part in the study if they desired. While initially there was interest from all 60 registered high school students, only 30 followed through on their intent to take part.

Data Collection

The study began with the distribution of a questionnaire to the 30 Inuit youth. The questionnaire, offered in both Inuktitut and English, contained 20 questions meant to assist in understanding gaming practices of Inuit youth while attempting to identify evidence of learning occurring during gameplay. The questionnaire data was collected in January 2012 at the school in a group setting, which participants chose as the most comfortable setting for completion of the document. From these 30 participants, 10 were then chosen to conduct a semi-structured interview with the researcher at a place and time deemed comfortable for them, though one student was unavailable to conduct the interview. The interview questions were developed such that they would address the gaming procedures and practices of Inuit youth while also obtaining information regarding their apparent impact on learning. The interviews were conducted in a quiet office and were designed to promote a relaxing conversation. As all interviews were conducted in English, there was no need for Inuktitut translation, and the researcher alone transcribed all interviews. This documentation is quite important to the analysis of qualitative research for several reasons: it is essential for keeping track of an ever growing collection of notes and documents; it begins the process of outlining the analytical process; and it encourages continuing analysis and conceptualization concerning the texts (Chambliss & Schutt, 2012).

Data Analysis

According to Creswell (2008), the first step in the analysis of qualitative data is exploration: “A preliminary exploratory analysis . . . consists of exploring the data to

obtain a general sense of the data, memoing ideas, thinking about the organization of the data" (p. 250). After all surveys were collected, the one-on-one interviews were conducted, the transcribing process was finalized, and a general analysis was done in order to get a preliminary idea of the information the youth were trying to convey regarding gaming. During this initial investigation, I began to compose my thoughts, both in my head and in writing, regarding the key themes of the responses and anecdotes provided by the participants.

I initially immersed myself in the questionnaire data in the days leading up to and following the interviews. This allowed for a better idea of what the participants were thinking regarding video games and prepared me to delve deeper when in the interviews. While the interviews were taking place, I jotted notes and ideas in a journal including physical movements, level of comfort, and facial expressions. I began transcribing the interview data shortly after the face-to-face conversations actually took place. This allowed me to include not only what the participants had said in the interview but also the details of their comfort level and body language as they were still fresh in my mind. The process of transcribing the data was followed by listening to the recordings of the interviews, one after the other, while reading along with the transcriptions.

I went through this process of reading along while hearing participants' several times to ensure I was not missing any nuances in the stories they were attempting to tell me. Through my experience, I have discovered that the Inuit are not always forthcoming with their responses, and this meant that the first connections with the material had to be carefully conducted in order to draw as much beneficial data as possible. As mentioned earlier, I have been able to sit in on several studies where students are put in a group

setting and are asked for their opinions by an outside researcher. As an observer I could see that this type of setting (grouped with their peers, asked directly their opinions by someone they had just met) was not going to obtain much data. These observations formed a significant part of my approach to this research and data collection. This process of multiple reading and listening interactions with the interviews provided additional read-throughs of the data and helped me obtain a better sense of the "whole" of the study. These read-throughs of the data formed the foundation of the coding process used.

Throughout this study, I have continuously revisited the interviews and surveys. During the initial interaction with the data, I felt I was not getting deep enough into the material and was not hearing the story that each participant was trying to tell me. The subsequent attempts at deeper interactions with the data occurred with the help of the computer-coding program TAMSAnalyzer. While this program helped with the organization of the data collected and with the initial coding and searching for redundant codes, by using it, I began to feel disconnected from the material.

There was not a great deal of data, and I began to feel that perhaps the program was not necessary and that it was providing a barrier between what the participants were saying and what inferences I was drawing. The two sides of this research process—their words and stories and my analysis—were not jiving. I continued to look at the data using the program until the frustration mounted and I decided to approach the data in an old-school way, with a pencil in hand. Then the pieces began to fall into place. Each subsequent time I revisited the material, the story became clearer.

When I felt I had a grasp of what each participant was trying to say about their experiences with video games, I then began to develop codes to label specific phrases and

ideas conveyed in the interviews. I paid particular attention to each participant's thoughts on the video game phenomenon and the processes and strategies they used to succeed in the games, along with the social aspects of their gaming experiences. All of these phrases and their subsequent code placement were then organized onto a chart where I got a better overview of all of the material and the bigger picture emerged. Using this chart, I was able to identify the key themes that arose from the participants' experiences. This process led to the writing of an in-depth account of the findings of the research.

Verification

In order to validate the findings of this qualitative study, it is imperative that I establish the accuracy and credibility of the project. This will be established in this research through the following sections "researcher as instrument" and the triangulation of data sources for the research. In describing these two components I will establish the validity of this study.

Researcher as instrument

Conducting qualitative research is an "active, creative and inspirational process" (Graue & Walsh, 1998, p. 91) where representations of a phenomenon are created through data collection (Barrett, 2007). The researcher collects the data concerning the phenomenon and their "knowledge, perspective, and subjectivity in data acquisition" (Barrett, 2007, p. 48) is given prominence. In order to establish credibility, it is therefore important to reflect on the "researcher as instrument" in this study.

Golafshani (2003) stated that "when quantitative researchers speak of research validity and reliability, they are usually referring to a researcher that is credible while the credibility of a qualitative research depends on the ability and effort of the researcher" (p. 600). This study required an informed perspective on the current culture of Inuit youth the history of the Inuit culture and how it has arrived at its current state. It also called for knowledge of the discourse of video games and their influence on youth. As indicated in the introduction, I approached this project with teaching experience in the community at the centre of this study, along with a predilection for video games garnered through many years of interacting with these games. Otherwise it would have been difficult to collect the amount and quality of data from the respondents or to arrive at any meaningful interpretation of the data for Inuit youth. The Inuit are wary of outsiders attempting to gauge their knowledge for use in research and presentations. The trust I had developed in the hamlet and the participants' knowledge of my interest in gaming allowed the youth to openly discuss their culture and the place of gaming and formal schooling within it. Through these experiences and this cultural understanding, I was originally led to the observations concerning the apparent evidence of learning in the Inuit youth's gameplay sessions that I had seldom seen within formal learning environments within the school. These observations would eventually manifest themselves the present study.

Triangulation

Triangulation is the method used to corroborate evidence from different individuals, types of data, or methods of data collection (Creswell, 2008). As Mathison

notes, “triangulation has risen as an important methodological issue in naturalistic and qualitative approaches to evaluation [in order to] control bias and establishing valid propositions because traditional scientific techniques are incompatible with this alternate epistemology” (as cited in Golafshani, 2003, p. 13).

This study has utilized the between-method approach to methodological triangulation. This type of triangulation is established when multiple qualitative methods are used to study the phenomenon at the centre of the research. This study began with researcher’s observations of participants withdrawing from school assignments of varying difficulty stating “I can’t do it” or “*Ajuqtunga*,” yet they often spoke of their triumphs in video games that require many hours of dedicated gameplay and that are designed to constantly increase in level of difficulty.

The actual study then included a further two methods of data collection. The initial data was collected through a questionnaire offered to all high school students. The questionnaire allowed for information on the general thoughts and experiences of the participants with gaming and how they proceed through the games when interacting with them. This data led to a series of semi-structured interviews that were conducted with a sample of the respondents to the questionnaire. The interviews allowed for a deeper understanding of the gaming practices of Inuit youth and of their perspectives on how they learn to proceed and succeed in video games. In this study, all three methods (observations, questionnaires, and interviews) led to a similar explanation regarding evidence of learning by Inuit youth playing video games as well as the factors informing the level of Inuit engagement with these games.

Conclusion

In this chapter, I have outlined the processes used in conducting an intrinsic, ethnographic case study that aimed to investigate the gaming practices of Inuit youth in the hopes of finding what evidence of learning they demonstrate; what, how, and why Inuit learn from gaming; and what elements of the games promote engagement and strong self-efficacy beliefs among the Inuit. This chapter included discussion regarding the research methodology and design, ethical assurances concerning the study, the participant selection process, data collection procedures, as well as a description of analysis process and a description of validity of the method chosen. In the next chapter, a detailed outline of the data collected will be presented along with a detailed description of the bounded system that is the gaming practices of Inuit youth in one Nunavut community. Evidence of learning and factors causing engagement found within that system will be identified.

Chapter 4: Findings

This chapter conveys the results of the data gathered for this study. It will first look at the data collection and analysis in more detail. It will offer a context for the participants' words and thoughts regarding gaming. This chapter will provide the evidence that informed the researcher's conclusions regarding the research questions, which will be laid out in the next chapter.

The title of this study, *Expert on Drums, Could Be Experter*, is a phrase that began my research into the video gaming strategies and experiences of the Inuit youth of one community in Nunavut, Canada. The words, hastily scribbled on a makeshift Halloween costume that incorporated a drum set from a *Rock Band* video game, struck me for the pride and confidence displayed in the statement. It displayed a level of pride and confidence that I could never recall from any school activities that I had been involved in with Inuit youth.

So, what was it about these games that instilled this level of pride and confidence so that half of all the high school students in this community felt encouraged not only to take part but also to provide me with a better understanding of this practice and of their lives as well? In this chapter are the stories they told me.

Surveys

Initial data was collected in the form of a survey distributed to the high school students of the community at the centre of this research. The survey consisted of a multiple-choice questions as well as questions that allowed participants to add written comments about areas of interest in this study (See Appendix D). This information was meant to gather a general overview of the gaming practices of the Inuit youth because, even though I am an avid gamer, I am only familiar with the gaming practices of people like me—White, middle-class males. This study encompassed Inuit youth, both male and female, of a variety of ages, and it was important to see if my thoughts on the participants' gaming practices were accurate.

Most of the multiple-choice questions allowed participants to mark as many choices as were appropriate given their personal gaming experiences. Several of the multiple-choice questions focused on the setting and social aspects of the gaming sessions. This information was sought to try to provide an idea of the environment they were playing in and whether or not it affected their levels of motivation and engagement with the games. When asked "Who do you play video games with?" participants showed that they spent the majority of their time gaming among friends and family, while only a few stated that their gaming sessions were solitary experiences. Over two thirds of the participants voiced that friends were always present when they took part in gaming sessions. An additional question in the same vein dealt with the roles taken by the friends attending the session. The friends were almost always there in a participatory capacity; most participants communicated that the friends competed in the sessions and on other occasions they cooperated by helping each other through the game. Though a small

minority, some participants noted that their friends often took a passive role, simply sitting back and viewing the gaming without becoming actively involved.

There was also a series of multiple-choice questions that dealt specifically with participants' overall gaming experiences. One of my research questions asks: Are video games a technology of learning for Inuit youth? If so, what characteristics of learning can be identified through an investigation of successful Inuit gaming practices? I was interested to see exactly how the youth learned how to play the games. It was common practice in my gaming sessions to learn how to play a game by reading the manual; however, in the experiences of the participants in this study, the vast majority, 23 out of the 30, explained that they learned as they played the game—the game itself was the teacher and helped them learn to play. The other option was that peers who had taken the cooperative role noted in an earlier question taught them how to succeed in the game.

I was also interested to see what happened when the participants came across a difficult part of the game, as I had often seen the response of many Inuit youth when confronted with difficult work and challenges in a school setting: usually "I quit," or "*Ajuqtunga*," or acting out in class so as to not have to focus on it. The majority of participants, 17 out of 30, related that when they interacted with a video game, their response was to continue attempting the game until they succeeded. Five participants said that they actively sought help from friends, while five others noted that they often left the game for a while to return to it later and attempt the game again. A few participants mentioned that they would quit the game and not return.

I knew my own personal responses and emotions when taking part in gaming session. These responses ranged from frustration to happy anger (a bizarre emotion of

laughing at how frustrated you have become) to blissful immersion in the game world to absolute elation upon completing a difficult task. I was interested to see if the responses of the Inuit youth mirrored or differed from my responses. The question "How do you feel when playing video games?" again asked participants to check all responses that applied to their experiences. These questions about responses to challenges and their overall feelings while gaming were meant to determine if the emotions they displayed while learning in a traditional educational setting were typical or if they differed from the emotions shown in a more successful learning environment. The majority of participants, 21 out of 30, said that they felt excited and content when playing video games, but 20 of these participants also related that they felt challenged. Only a few participants noted that negative feelings such as sadness, anger, or frustration were involved in their gaming sessions. A majority of the participants, 22 out of 30, also mentioned that, once finished a game, they were likely to return to it later, to play it with their increased knowledge and their acquired gaming skills. Furthermore, 17 of the participants communicated that they celebrated their success with video games by telling their friends and family.

In the written response portion of the surveys, one question was "What do you like about video games?" This question was meant to reveal what it was about the games that held their attention and kept them as "gamers." Their responses covered many different aspects of gaming. Some discussed the ability of games to keep their attention: "They don't let us be bored" and "Does not make me bored" were typical responses. Participants also often voiced the idea of gaming being challenging. Responses such as "being challenged, it's fun," "challenges and entertainment," and "some are educational, exciting, challenging, adventurous" came up in the participants' thoughts on this question.

There were also hints that the participants liked the feeling of making progress that the games created: “finishing missions” and “feel like you are getting to a higher level.”

Whether or not video games were a technology of learning for Inuit youth was captured in the question “What do you learn while playing video games?” Responses to this question varied widely. Participants noted that they learned “words I don’t know,” “accuracy,” “better gaming skills,” “math, dance moves, other peoples’ cultures, how the world used to be,” “everything,” and the interesting response, “we learn something.” Some responses outlined contextual learning depending on the game: “dance moves,” and “learn a bit about machine guns.” Analyzing the in-depth discussions would provide additional insight into this question.

Interviews

Given my previous anecdotal evidence of the approaches the Inuit youth had toward success in video games, and combining that with the knowledge attained through the surveys, I was interested to see what information I could obtain by expanding on participant responses through one-on-one interviews. I will provide a brief description of each interview participant and the main themes emerging from their interviews. Participants will be identified with numbers to ensure their anonymity is maintained.

Participant #1 (P1)

The first participant was a grade 11 student at the time of the interview. He began playing video games around age five and stated that gaming sessions for him had now moved to a major sitting of five to six hours once a month. He is a polite and well-

behaved young person who enjoyed the more violent aspects of games because he liked the idea of doing something he was not allowed to do.

He spoke often of enjoying the constantly changing difficulty levels of the challenges that the games were providing. He also enjoyed the ability of the game to provide immediate feedback and to tell him exactly how he was improving and proceeding through the challenges. He liked being able to approach the games from many different perspectives until he found an approach that led to success in that particular level of the game.

P1 spoke often of the cooperative environment that the games were providing for his companions and him. He said that when he was stuck in a game, his usual course of action, after trying different approaches to no avail, was to seek the help of a friend who had already mastered the game. Furthermore, he said that he was not interested in the accomplishments in the game that anyone could get. He wanted to show his ability to excel and to obtain the accomplishments that were rarely received by any of his friends. He pointed out that this approach with games was completely different from his approach to school work. In school, he was a strong academic student but did not push himself to excel, as he did not want to appear to be a teacher's pet and did not want to make anyone feel bad for not excelling academically. This participant was the only one to eloquently put this phenomenon into words—schooling was one of the only aspects of his life where competition was not encouraged and enjoyed.

He also communicated that he was far more likely to enjoy learning how to do something when he was in control of the learning. He noted that "in school when you cannot learn it, teachers, some teachers, would try to teach you so much that you do not

want to do it anymore. But in the game when you cannot learn it, you start challenging yourself instead of that teacher challenging you."

Participant #2 (P2)

Participant 2 also was a grade 11 student when he was interviewed. A polite and intelligent young man, this participant had been playing video games since he was eight or nine years old. His preference was video games that seemed to mirror interests and experiences within his own life, such as military-style games that mirrored his involvement with quasi-military organizations, such as the Royal Canadian Army Cadets, in the North. He estimated that he played video games over three to five hour-long sessions per week. One of the main features about gaming that held his attention was the fact that it was hands-on; he loved the feeling of being in control and he liked doing things with his hands.

Throughout the interview, he explained his persistence while gaming by saying that he continues to try to move past difficult portions of the game over and over again and enjoyed having the ability to choose many different solutions to the puzzles and challenges the game presented him with. He further said that gaming sessions for him were multi-generational affairs that involved members of his family playing together or, at the very least, providing ideas and potential solutions as he attempted to succeed in the game.

I asked the participant why the learning process was different with games than it was in school. He expressed that the difference was "'cause, um, people tell you what you are doing wrong and in game they don't tell you what you are doing wrong; they just

make you do it over and over." He elaborated on this a little later in the interview when he stated, "Teacher go through this over and over till we literally know how to memorize it, takes a while. And the games just do it once, and you go past that, and it stays there, we easily remember how, and when in school we do not exactly know how." He also noted that the only reason he felt challenged in school was when his brother challenged him to bring up his grades.

The participant also appreciated the system of immediate feedback that modern games provide. In the last generation of gaming consoles, accomplishments (Xbox 360) or trophies (PS3) were introduced. Simply put, these systems let you know instantly when you achieve one of the goals of the game, and many of the games have a screen that allows you to see your progress toward the next accomplishment of a trophy. He spoke proudly about one of the more difficult accomplishments he had obtained and mentioned the reason for his pride: "It takes a while to get those achievements." He also commented on the immediacy of this feedback versus the delayed feedback he experienced in school: "'Cause, ah, we did so much . . . when we played game we play it for an hour and we get achievements"; but according to him, feedback in the form of reports in school come "after a month."

Participant #3 (P3)

Participant 3 was in grade 11 at the time of the interview. She believed that she first played video games sometime around her third birthday and had a preference for games on Nintendo consoles, particularly games with the *Super Mario* characters for which Nintendo is known. Her love of music and dance finds its way into her gameplay

through rhythm and karaoke-style games. At the time of the interview, she noted that she was playing three to five times a week for approximately three hours in each session. She also relayed her appreciation of the adventure, or the journey, that gamers take.

This participant, like the ones previously mentioned, often joined in gaming sessions that involved multi-age and multi-generational participants. She noted how her parents, brothers, and even extended family are often there for the sessions and participate by encouraging her and even offering some suggestions as she engages with the game. Additionally, like previous participants, she said that the game itself is the tool for learning how to play and succeed at the game. This participant drew a comparison with the approach to learning that is offered in schools: "If we are getting a math assignment, your mind is so mixed up with these letters and the numbers, and you ask the teacher what does this say and what does that say, but the game, the actual game disc, helps . . . its shows you what you need in order to move forward." She then went further trying to offer a reason as to why the game succeeds where schools struggle in helping participants through challenges: "Because of the game, you actually see your challenge. You see a piece of paper on math and you see kind of like three dimensions in TV. So you get actually excited and you get challenged for it. But when you see the blank paper with those letters and numbers you think, well that is a challenge. … Because some of them are kind of challenging," she added, "and sometimes I do not know why teachers do not explain it well." She also expressed that the multimedia aspect of game design benefits her learning: "Because it is not showing, like for instance a teacher gives you this exam and they tell you to do this and that, but looking at a paper, it is really, really boring. Like

if teachers like bring a huge flat screen TV and it had exam questions, I know I would get the right answer right."

As the interview continued, the participant began to discuss how the hands-on learning that happens within the game was beneficial to her and other youth's overall success in the game: "A little kid doesn't know anything about a iPad and then they have a little cute game for kids and they touch it and they know how to play it." She mentioned a further aspect of gaming she enjoyed—everything being contextualized and combined with hands-on learning: "Just go through it, just go through the controls and look at the screen. Just say that it is shooting and I didn't know then I would press it and I would be like, oh, that is shooting. These joysticks the head moving around and the body, I would be like, oh, yeah."

Participant #4 (P4)

Participant 4 was a grade 10 student when the interview took place. He did not have a strong grasp of English and often struggled in the interview to put his thoughts into words. He believes he first played video games when he was three years old and remembers fondly his time playing *Super Mario Sunshine*. He has since moved on to multiplayer games such as *Halo*, which has become an important peer activity at the home of one of his friends.

His sessions involved groups of up to 11 young people ranging from 10 to 20 years of age who take on a cooperative role where multiple players work together as a team to combat the computer-operated enemies. He also mentioned the group worked together to modify their own versions of the multiplayer maps included in *Halo* games.

P4 also frequently noted the importance of the contextualization of all aspects of the game within the game world. He mentioned that he felt in control of learning the game due to the design—"Just start playing and learn how the controls go"—and he spent a great deal of time in the game world, even after the main campaign of the game was finished, "collecting stuffs like rings and those kinds of things." Many modern video games add numerous side quests so that, even though you have finished the game per se, you can still spend hours enjoying the game world itself. When comparing the learning occurring in games as opposed to the school, he further expressed how his actions in the game were contextualized so he understood what exactly he was doing and for what reason: "Like in *Call of Duty*, words like 'prone,' we would press buttons and start going into prone position. In school it is like words, reading, reading the stuffs." He said, "In school it is about like words, all words, and the game is like modern somehow." He also mentioned that he followed the accomplishment system identified by an earlier participant in order to move toward these goals in the game: "About the achievements . . . every time I start playing a game I would search the achievements and start working towards them."

P4 was always seeking out the greatest game challenge he could find. When asked if he sought out bigger challenges he made statements such as "Yeah, [I play] on legendary difficulty," "I would want more challenge," and even continued to test himself by "challenging opponents." He also said that when confronting challenges that were difficult to pass he would "get mad at first. Just shut it down, wait for maybe until it's tonight, and then start playing again," and while he was away from the gameplay he

would “think of what I am going to do like . . . thinking of it and start thinking lots and like . . .” as he tried to figure out his next moves and potential solutions.

Participant #5 (P5)

Participant 5 was a grade 10 student who began playing video games at around eight years of age and now plays a couple of times each day, with each session lasting between one and two hours.

Persistence was one of his main approaches to video games. He stated that in order to succeed in games, he did not walk away from the game or quit: “I just keep trying and trying.” He expressed his interest in the ability to attempt multiple approaches to solving the problems he faces in games. He noted that he enjoyed “like a different technique. Yep.” All of the participants liked the ability to find their own personal method of completing challenges and that there was not only one right answer. This contrasted with how he dealt with difficult challenges in school, where “if I can’t finish it, I will just watch it.” This meant he would leave the assignment on his desk and refuse to work toward its completion. He also mentioned that for him “school is the most hard work.” This type of thinking also found its way into our discussion on the feedback system of achievements on the Xbox 360. He nodded and smiled when we spoke of the pride that he felt when receiving achievements on the Xbox, but when he received his report card it was “just the paper.”

Socially, P5 said that he usually played with one or two friends, and that it began as a cooperative team approach to completing the games. He discussed how when faced with a challenging obstacle such as “against the Boss . . . we take turns.” This continues

even when the friends are not taking turns but instead "he gives me some advice" on how to successfully proceed. However, after the single-player campaign of the game is completed, the cooperative side of the gameplay seems to end and a more competitive approach takes control. At that point, he said the friends will play against each other, challenging each other to see who is the best at that particular game.

Participant #6 (P6)

Participant 6 was a grade 10 student and was not able to remember how old she was when she began gaming but did inform me that the *Super Mario Brothers* games on Nintendo consoles were always her favourite. Though she did express that her gameplay had diminished in recent months, which was understandable, since she was a full-time student and working after school, she said that she still managed to play once or twice a day for a half an hour to an hour.

This participant was interested in the challenges of games, stating that she liked "to accomplish a stage." When faced with these challenges, her approach was to "keep trying" and to look for alternate routes for success in the difficult stages. She was, however, one of the only participants to mention that this was the same approach she took when it came to challenging school work. In order to keep the challenges interesting, she noted that she continues to go back to the game but challenges herself through "going to a higher [difficulty] level," and that this approach to challenges "makes you want to keep going and try harder." She also mentioned that the competition side of gaming, between her friends and herself, kept her engaged "because it is fun . . . because of the shooting and trying to get the most points."

Participant #7 (P7)

Participant 7 was a grade 12 student at the time of the interview and informed me that she began playing video games at around the age of six or seven, when she first played *Mario Kart*. Her favourite games these days are in the action genre, including sports games such as *EA Sports*, *NHL 12*, and shooter games such as *Call of Duty: Black Ops*. She continues to play at least once every day for between one and two hours in each session.

As was expressed through nearly all the survey responses, and by her fellow interview participants, she too particularly enjoyed the way challenges are structured in video games. When presented with difficult challenges in a game, she noted that her personal response was "I just quit," leaving while thinking about "probably anything but the game" and only returned to the game "when I cool down." When she did return to the game, she outlined her strategies, including "probably get better weapons or try something different" and then "don't quit" again. When presented with similarly difficult challenges in a school setting, she said, surprisingly, that she has a similar response where she "shut myself down. Yeah, so you would be in class but not really there." She also discussed how she felt challenged in school when she lived in southern Canada: "Down south was hard work in school" and "when I was living down south I felt challenged." She expressed that the level of frustration she felt while attending school in southern Canada was comparable to the level of frustration she feels while struggling with difficult parts of the game or as she puts it, "same type of arghh."

Her typical gameplay session involved her friends, usually with a maximum of four players. P7 noted that her preference was a competitive gaming environment as opposed to a cooperative one because it is "fun, more challenge." This is not surprising because, as I stated earlier, nearly all aspects of the Inuit youth's lives, in my experience, revolves around competition and challenging one another. She did also note a significant sense of pride when she received one of the achievements while playing Xbox, but that when she received feedback in school, "I think accomplishments in school is a little more exciting." Being academically strong may have influenced her opinion on this as participants almost all claimed to feel more pride and sense of accomplishment from receiving the achievements in their gameplay.

Conclusion

In this chapter, I have shown how the participants' responses outlined the themes and strategies that are prevalent in their gaming sessions and that led to their success in the games. In the next chapter, I will discuss the data and the interpretive themes that arise from this study. A story has emerged from the data about what draws Inuit youth to video games and allows them to stay motivated and persistent until they find success with the medium. In the next chapter I explain how the data from this study reveals a preoccupation among the informants with issues of autonomy, self-direction, and control.

Chapter 5: Discussion

The purpose of this research was to determine why Inuit youth express higher levels of engagement and learning within the video game format than in their daily school interactions. The research sought to answer the questions: (a) Are video games a technology of learning for Inuit youth? How? (b) What factors inform and explain Inuit youth's engagement with video games? As no known studies directly address the relationship between the learning of Inuit youth in Nunavut and video games, this qualitative research provides significant insight into learning and engagement, particularly regarding the Inuit youth participating in the study.

Before delving into the discussion of the data collected for this study, I feel it necessary to reintroduce the framework through which the entirety of this research has been filtered. The study is conducted through the theoretical lens of cultural studies, particularly the cultural politics of schooling and of learning that the participants partake in, with guidance from the traditional Inuit learning value set of *isumaqsayuq* and the work of J. P. Gee and the principles of learning found in video games.

Couldry (2000) states that within cultural studies, culture is thought of "in relation to issues of power, the power relations . . . which affect who is represented and how, who speaks and who is silent, what counts as 'culture' and what does not" (p. 2). While noting the differences between the successful learning taking place in video games as opposed to the familiar struggles of formal academic learning, this study acknowledges the hegemony of the dominant culture that continues to exist in Nunavut schools. Stairs (1988) notes that "formal education is not only alien to Inuit culture but, as initially transposed from the south, is in direct conflict with indigenous modes of transmitting

knowledge across generations" (as cited in Berger, Ross Epp, & Moller, 2006, p. 182). These modes of transmitting knowledge for the Inuit, *isumaqsayuq*, provide a framework for analyzing video games but they are not evident in the Nunavut schools where Inuit "experience persistent, disproportionate academic failure" (Wright, Taylor, & Ruggiero, 1996, as cited in Berger, Ross Epp, & Moller, 2006, p. 182). As this discussion of the data continues, a clear picture emerges of the major differences experienced between the school culture the Inuit youth interact with and the culture of video games.

Evidence in this research indicates that video games are indeed a technology of learning for Inuit youth. Factors that inform and explain Inuit youth's engagement with video games also became clear. These findings have implications for the education system currently in place in Inuit communities, as they outline factors that could contribute to more engaging, relevant, immersive, and active lessons and classroom arrangements. Attention to these factors could create a more enjoyable learning experience that increases self-worth and self-efficacy.

In this chapter, I examine the data in light of how the Inuit have traditionally approached learning, my personal experiences as a southerner with teaching and learning in the North, and the research of James Paul Gee on the value of gaming for learning. At the core of this discussion will be the Inuit youths' demonstration, through the information they provided in the surveys and interviews, that video games were a technology of learning. Their words and insights guide this discussion and analysis.

Are Video Games a Technology of Learning for Inuit Youth?

The spoken and written words of the participants clarify that video games are a technology of learning (Gee, 2007; Prensky, 2001; Shaffer, 2006; Squire, 2011) as indicated by (a) video games reflecting elements of the Inuit traditional form of learning known as *isumaqsayuq*; (b) gamers experiencing levels of success; (c) gamers being able to analyze their thought processes and methodologies when it comes to gaming; and (d) gamers showing their preference for the active learning that digital games embrace.

(a) *Isumaqsayuq*

Isumaqsayuq is the Inuktitut word to describe the traditional Inuit methods of educating their children. This approach differs from *ilisayuq*, which refers to the European system of education and schooling. *Isumaqsayuq* refers to education that involves knowledge transfer through observing and imitating the daily activities of the family and the community as a whole (Stairs, 1992); the contextualized learning of skills within very practical community tasks; teaching children through a process labelled "backwards chaining," which allows them to complete the final steps of adult tasks giving an immediate and important role in community work (Stairs, 1995); and the use of games, play, drama, or "interrogations" surrounded by the adults who care for them ensuring the children's safety and protecting them from defeat as they grapple with these potentially momentous scenarios (Briggs, 1998).

In the preliminary research for this study, I came across the concept of *isumaqsayuq.* This was my first encounter with the word and concept, although I had teaching experience in Nunavut. The concept intrigued me, as I saw correlations between

game design components as informed by Gee (2007) and increased engagement, persistence, and learning among Inuit youth. Informed by Gee's 36 principles and the concept of *isumaqsayuq*, I began to notice similarities between the two. In fact, each of the pillars of *isumaqsayuq* is comparable to many of the principles that Gee has outlined in his work (see Table 5.1 for a complete comparison). An analysis of the findings of this study reveals evidence of the pillars of *isumaqsayuq* in the responses of the Inuit youth describing their engagement with video games.

In watching the Inuit youth in various learning settings including gaming, I realized that observation and imitation were paramount for successful learning. Participants frequently noted that their play sessions took place with multi-age groups of people with varying skill levels. These sessions included competition and cooperation as well as plenty of opportunity to watch what other players were doing and to note the strategies they were incorporating. Their audience members provided advice and encouragement for the game players. Many participants said that they returned to the game after completing it and learned what was required for success because "now that I know how to defeat them, it is actually more fun." This comment fits with the *isumaqsayuq* principle of observation and imitation: the game has taught them how to triumph, and then they head back into the game world to replay or attempt a higher level of successful imitation.

Such contextualized learning was not a conscious choice of traditional Inuit education—it was what the Inuit did. The Inuit used the tools and knowledge at hand in practical tasks around the camp in order to help the family survive. The school system, through the traditions of the often-abstracted knowledge it predominantly supports, does

not necessarily provide tasks that are relevant or practical to the youth. However, in the game world, as will be discussed in more detail in the next section, everything is "practical" and "relevant" to that virtual world. Even when it comes to understanding words and their meaning, games provide a technology for learning for the youth. In class, I observed participants faithfully writing notes, but their comments in this research indicate that while many of them knew what each individual word meant as they wrote it, the context of the entire sentence was not as clear. As a respondent stated, "like in *Call of Duty*, words like 'prone,' we would press buttons and start going into the prone position. In school it is like words, reading, reading the stuffs." The word "prone" here is contextualized—it becomes associated with button action on the controller and consequently the action of the avatar on the screen. As another respondent said, "in the game, you actually see the challenge."

The idea of backwards chaining is associated with *isumaqsayuq* and is a wonderful way to get youth involved in hands-on learning that they see as practical, relevant, and important. Having young people complete the final portion of difficult tasks such as the final stitching on a pair of *qamiqs* (Inuit boots) demonstrates how this idea manifests itself in Inuit society. To get them to create an entire pair of these boots would be difficult and frustrating and could lead to the "I quit" response that I heard so frequently heard in the classroom. Video games include tutorial stages, hint systems, and the ability to change difficult settings as you progress. In this way, participants take part in the learning *with* guidance from the game system to ensure the level of frustration does not exceed their belief in their own ability to succeed.

The majority of participants surveyed listed "challenged" and "excited" as two of the things they feel when playing video games. These descriptors differ from my observations in the classroom, where participants definitely felt challenged but their level of frustration soon outweighed their self-efficacy. Upon further probing, participants gave their own definitions of "challenged" as "hard but not too hard" and "difficult but not undoable." Other responses included "a challenge is something difficult but you can still do it" and the game system "makes you want to keep going and try harder." The backwards chaining, or the game design principles used to aid players, certainly plays a part in this attitude toward the games. These pillars of *isumaqsayuq* have been echoed by researchers who have outlined a list of benefits for using gaming for learning. For instance, Green and McNeese (2011) include the ideas of excitement-generated curiosity and motivation, social participatory problem solving, scaffolding, safe simulations, and experiencing cause and effect first hand as reasons why the video game format could be incredibly beneficial for learning.

I was interested in discovering why the Inuit youth were able to learn to engage successfully in many activities, such as hunting or sports, while continuing to struggle with learning in the traditional classroom. *Isumaqsayuq* is the answer to that question—the pillars mentioned above are evident in all of these other successful learning activities. I believe that the pillars of *isumaqsayuq*—observation and imitation, contextualized learning, and backwards chaining—are the reasons for their learning how to successfully complete these activities, and it is why video games can now be counted among them.

(b) Success

The next element that demonstrates that the youth who participated in this study are learning when interacting with video games is that they succeed and complete their conquests in the gaming world. The modern video game consists of a series of complex puzzles and investigations. In order to succeed, game players must learn complex kinesthetic combinations of game controller manipulations and the rules that govern the game world alongside its culture, history, and nuances while also attempting to understand the personalities, motivations, and weaknesses of the enemies they face. Along with all of this, game players learn a series of increasingly difficult skills that have to be used in order to complete the game. Wysocki (2013) states, "A video game demands response. Buttons and joysticks must be manipulated, paths must be mapped out, and flaming barrels must be jumped. Failure to do so means failure to continue the experience" (p. 2). The game developers who have designed the game system have, primarily, business and profits as their motivation and for this reason they have designed a system that is meant to challenge gamers while allowing them to learn the content necessary to succeed.

If deep learning has occurred, it should mean that gamers are able to demonstrate their grasp of the knowledge through some sort of application. In video games, this means that players proceed from stage to stage, and the greatest indication that you have learned the content necessary is that you successfully complete the game. Completion of video games normally occurs when you defeat the "final boss" stage—a battle that usually requires the gamer to utilize aspects of everything learned throughout the entire game. All the participants in this research discussed some level of success in video games. For the

more hardcore gamers, success took the form of completing the game and then attempting new challenges by increasing the difficulty level or challenging other players; for more casual gamers, it meant passing stages and enjoying the experience as they moved forward, perhaps in smaller increments.

Participants referred to the pleasure of success in the form of obtaining accomplishments or trophies, depending on the system on which they were gaming. They noted how "when we played game we play it for an hour and we get achievements" and they beam with pride as they outline their most impressive achievement success—"three kills in one bullet." The participants also mentioned how once they have their initial success of completing the game they go back to succeed by challenging others: "So you have already finished it and you will get someone else to play with you to see who is the better of the two type of thing." They also mentioned how they often would replay the game on a higher difficulty like "legendary," and how after learning the content it actually made the games more enjoyable: "Like, at first it was difficult playing the Mario *Galaxy Two* because I didn't know what I was supposed to do. Like, try to kill those or defeat those obstacles and those galaxies. But now that I know how to defeat them, it is actually more fun."

Games require players to learn particular skills before they can proceed; gamers must apply the knowledge of these skills in a practical test within the game world. If the player is not able to do this, they do not move further. Lammers and Voorhis (2013) reworked Bloom's taxonomy to create a model of how game-based learning takes the gamer through the learning process. They state, "videogames ask players to learn by doing . . . immediately tapping into the higher cognitive levels of analyzing and

evaluating . . . as players continue . . . they apply knowledge in context and develop understanding of the games' objectives and mechanics" (p. 3). This is quite different from the participants' experience in the education system. For example: the student is in math class, attempting to learn the material. Within a given time during which the skills are supposed to be acquired, perhaps two weeks or even a month, there is a test. The student then attempts to demonstrate knowledge of the skill. If there is failure at this test, limitless attempts that would ensure the skill is learned before they move forward are not offered. Therefore, when the student arrives at the "final boss battle," the final exam, they have not acquired this skill.

It is difficult for the participants to feel successful when they are not able to learn the skills necessary. In my experiences teaching in the North, student attendance has often been an issue. There are high dropout or push-out rates, and family obligations can be obstacles to success in school. I have seen students drop out in grade 6 only to return many years later and, due to their age, be registered as a grade 10 student. In fact, two of the participants that I interviewed, those that saw themselves as outsiders when attending school, had similar experiences in their schooling. The leap from beginning a project through to its successful completion can seem insurmountable in many cases. This is especially true when it comes to people who lack self-efficacy when dealing with the particular skills and knowledge required for that project. Backwards chaining allows participants to complete the final portion of a project while witnessing an expert go through the stages required for completion. This creates a sense of pride at having completed the project and learned the skills and knowledge necessary for its completion, which all add up to increased self-efficacy in the subject area. This makes the pathway to

success significantly smoother and more enjoyable for the participant. This experience is like jumping the most important stages of a video game, where the most important skills are being taught, and then attempting to succeed—it would not work. If the education system that these participants navigate were a video game, it would not sell well.

Table 5.1 reveals Gee's principles as they are made evident through this research. Two of these principles show how game design leads to demonstrated learning as players succeed within the game. First, there is the incremental principle whereby learning situations are ordered within games so that earlier events led players to form generalizations about the game world that benefit them later in the game. Within the game, everything they encounter teaches them about success, so they acquire background knowledge that allows them to form conclusions on how to proceed. Furthermore, incremental learning is often not possible. School absences, the lack of continuity between grades, and the high volume of teacher turnover in the North mean that it is difficult to establish an incremental pathway that leads to academic success for Inuit youth.

Gee also outlines the "concentrated sample" principle (see Table 5.1) whereby fundamental skills are taught early on in the game and players are presented with many examples of where the skills must be used. The learner is given the opportunity to practice them often (as often as necessary), and therefore has a firm foundation of the skills required to succeed in the game.

From the perspective of game designers, success in video games is the greatest indicator that the skills, knowledge, and rules have all been learned. For the participants in this research, the fact that games are designed so as to give players the belief that they

can succeed within the parameters of the game proved to be a major factor that inspired higher levels of motivation and engagement than they demonstrated in traditional school settings. If participants could enter the classroom with the same sense of anticipated success as they encounter gaming challenges, the increased motivation and engagement would help them on their way to success. This idea will be further explored in the discussion of the second research question later in this chapter.

(c) Analysis

Another factor that suggests that video gaming is a technology of learning for these Inuit youth is their ability to actively analyze not only how they are learning to play and succeed at the games but to also offer an analysis of why the learning experience is so different in schools. Whitton (2012) states that "learners should be empowered to have meta-cognition in the learning process; to understand why and how to learn, and to be aware of the approaches that suit them best" (p. 11). This type of thinking and analysis is also shown in Gee's 36 learning principles in the form of the "self-knowledge" principle and the "cultural models about learning" principle (see Table 5.1). The self-knowledge principle captures how, during their gaming sessions, players learn about themselves and their current and potential capacities. The cultural models about learning principle is where players think consciously and reflect on their cultural models of learning without the denigration of their identities or, in simpler terms, the players think about the game and how they are learning in it.

The level of analysis that these participants offered in this study, of both their gaming and the difference between the games and their school experience, was

significant. My impression was that the participants were literal and seldom looked at things in an abstract way. Being able to understand how learning occurs and how it differs depending on the environment demonstrates more abstracted learning; all participants who agreed to conduct one-on-one interviews regarding this research were able, to some degree, to differentiate these learning processes.

At the most basic level of analysis, participants could identify what they liked about the games. One respondent "liked controlling . . . I like doing stuff with my hands" and said he was interested in games like *Call of Duty* because he was "interested in Canadian Forces." This finding fits with other research that notes how "participants played video games that not only represented their personal interests, but also validated their desires and actions they might have longed for in reality" (Abrams, 2010). On a much deeper level of analysis, participants were able to offer opinions regarding why they struggled more with learning in the education offered in their schooling. They expressed how in school "people tell you what you are doing wrong and in [the] game they don't tell you what you are doing wrong; they just make you do it over and over" and that the "teacher go through this . . . till we literally know how to memorize it . . . takes a while. And the games just do it once and you go past that and its stays there, we easily remember how and when in school we do not exactly know how."

Participants furthermore ventured into discussing the difference in delivery methods and their impact on learning: "a teacher gives you this exam and they tell you to do this and that but looking at a paper it is really, really boring. Like if teachers bring in a huge flat screen TV and it had exam questions on it I know I would get the right answer right" and "because of the game you actually see your challenge. You see a piece of paper

in math and you see kind of like three dimensions on TV." These methods for delivering curriculum could add focus and engagement in the material but I am unsure how they would sustain interest over time. The point here, however, is the participants' ability to analyze how their learning might benefit from new technologies.

Though I did not ask the participants to discuss their opinions of pedagogy, I was intrigued with the responses that alluded to this. "The game, the actual game disc, helps . . . it shows you what you need in order to move forward" but "I do not know why teachers do not explain it well." One respondent even mentioned the more traditional approaches of schools as opposed to the games when he stated "in school it is about like words, all words, and the game is modern somehow."

These participants are able to explain their approaches to gaming and its differences from their academic lives. They described a level of comfort with the game as a teacher as opposed to the teachers they learn from in the school system. They also described the game as an active teacher: "It shows you what to do" as opposed to the regular teacher that "tells you over and over what to do." Gee (2004a) touches on this idea when he states, "the skill tests [in video games] are, as they often are not in school, developmental for the learner as opposed to evaluative (judgments carried out by an authority figure)" (p. 73). Furthermore, Bouvier and Karlenzig (2006) state that "Individuals who already feel marginalized in the education system believe that a teacher's primary role is to evaluate them. It is often difficult for young people to understand the differences between having their academic achievement evaluated and being judged as persons" (p. 26).

(d) Active Learning

As I begin this section, I would like to return to the preface of this research. Upon entering my first classroom in the North, I discovered material that seemed to be below the grade level I was supposed to teach. As the year continued I began to understand why this material was used. There were many different levels of students in the classroom, and this material was something they could all complete and be kept occupied with. This is the perfect example of how the struggles evident in the school become a misguided rationale for teachers to develop a passive learning environment, one that lacks challenge, innovation, and learning; but it was a strong behaviour management technique and that quiet classroom I sought was what I deemed to be an effective one. As Kurt Squire (2011) argued, "The school-based culture of passive knowledge reception (as opposed to production) needs to change . . . from the professional development of teachers . . . to the assessment system" (p. 35).

Active learning can be defined as "any instructional method that engages students in the learning process . . . active learning requires students to do meaningful activities and think about what they are doing" (Bonwell & Eison as cited in Prince, 2004, p. 223). Furthermore, "the core elements of active learning are student activity and engagement in the learning process" (Prince, 2004, p. 223). Now, as I look through the lens of active learning at the image of the classroom I regrettably ended up with by Christmas of my first year in the North, I realize there was little in the way of engagement for the students in my classes. They heard me talking in their second language and applying techniques meant to keep them in their seats and to keep the classroom quiet. I was, in fact, an example of *ilisayuq* and was not utilizing any of the features of *isumaqsayuq* that, as

noted earlier, are being employed successfully for Inuit youth through video games. My teaching approach appeared to be the norm within their school experiences—which raises the question: what learning could they possibly take from it? As Gee (2007) notes, "the theory of learning in good video games fits better with the modern, high-tech, global world today's children and teenagers live in than do the theories (and practices) of learning that they sometimes see in school" (p. 5). In the case of the participants, they are both teenagers who live in a "high tech, global world" and Inuit youth whose ancestors traditionally learned in the more active styles of learning demonstrated in *isumaqsayuq.*

I have mentioned throughout this research that the Inuit youth appeared to be successfully learning in all aspects of their lives *except* school: hunting, survival skills, solo and team sports, stone carving, and machinery repair. These activities are examples of active learning for the Inuit youth. To these I would now add video games. Gee's (2007) first learning principle of video games is the active, critical learning principle where "all aspects of the learning environment are set up to encourage active and critical, not passive, learning" (p. 221).

When referring to the learning environment they encounter in school, the participants' language is fraught with passivity, disengagement, and boredom. One of the participants noted that "school is the most hard work"; this respondent held an after school job and was known to spend time hunting on the land in the coldest months of the year. Participants note that, in the education system, "looking at the paper it is really, really boring" and even the feedback that finally comes "after a month" really is "just the paper" to them. Their passivity extends to general descriptions about their emotions while in school. One respondent said that "when I am in school, like I wouldn't get mad at

anything," as if anger in school might mean he actually cared about the educational process. Another respondent mentioned that that he would "shut myself down" if he could not succeed within the system, or "I will just watch" their work if they were not able to finish it quickly. In school, students take on a passive role; it anaesthetizes the students' minds as they attempt to regurgitate the material presented to them. In video games as with sports, mechanics, and hunting, they take on a much more active role—in fact they are at the centre of every aspect of the game.

Participants in this research demonstrated that they analyze their interactions with the video games and can compare and contrast their learning environment in schools with that of the games. An example is the respondent who noted, "you actually see your challenge [in the game]. You see a piece of paper in math and you see kind of like three dimensions on TV." Gee's semiotic principle states, "learning about and coming to appreciate interrelations within and across multiple sign systems (images, words, actions, symbols, artifacts, etc.) as a complex system is core to the learning experience" (Gee, 2007, p. 221). The respondent's emphatic response about actually seeing the challenge as she pointed toward an invisible television with both hands showed me that Gee's principles were realized among the Inuit youth that participated in this study.

Summary – Are video games a technology of learning for Inuit youth?

The insights of the participants in this study have revealed the reasons video games are a technology of learning for Inuit youth. The evidence suggests that the connection between the learning employed in the games and the traditional Inuit learning processes known as *isumaqsayuq* does show an increased preference for learning through

games. Furthermore, the youth enter into the games able to choose a personal path with varying levels of assistance from the game itself that allows them to learn all the material needed to succeed and therefore demonstrate the learning taking place. Remarkably, the participants were able to analyze their learning processes in the games and even how they differed from the learning processes they were required to adopt in traditional classroom settings. Finally, the evidence showed that the youth preferred the active learning in video games to the more passive learning they encountered in schools.

What Factors Inform and Explain Inuit Youth's Engagement with Video Games?

In this section, I turn to understanding what about these games inspires high levels of motivation and engagement for the participants. The evidence given by the participants suggests that video games are a technology of learning for Inuit youth. There are several reasons for their persistence and engagement in gaming: (a) the autonomy they have over their learning in the game; (b) the competitive side of gaming; (c) the contextualized game world in which they are immersed (as opposed to the abstract knowledge they are attempting to learn within the school); and (d) the sense of self-efficacy they experience within the games.

The findings of this study fall in line with other research regarding what motivates gamers. Przybylski and Rigby (2010) found that the motivations for gameplay were found in the capacity of gaming to satisfy basic psychological needs in areas such as competence (the need to have fun and succeed), autonomy (the player feels they have some semblance of control), and socialization (youth connect socially through gameplay). Ferguson and Olson (2013) further note that youth were motivated by the fun/challenge

of the games, the ability to gain catharsis and autonomy from the gameplay, and the social relatedness factor.

I have organized the factors that explain increased engagement under two separate headings: The Forest and The Trees. Data analysis indicated that one main factor contributed to increased engagement: the game players' sense of control and autonomy (the forest). This should not take away from the smaller yet quite important aspects of engagement—the sense of competition, the contextualized game world, and self-efficacy (the trees).

The forest

(a) Autonomy

Looking only at the surface of things, you might believe that Inuit youth have a great deal of autonomy and control in their lives. They have freedom at a young age to go hunting and to freely travel "on the land." Young girls are quickly given responsibility to care for children who are not much younger than they are, while the boys are sent off to gather ice for tea or to hunt and fish to help provide for the family—responsibilities that fall in line with what would have traditionally been the division of labour, including all the children to ensure survival for the family. Though the participants of this study live in a different world from that of their grandparents, or even their parents, the remnants of this type of freedom are still visible. Looking deeper, I started to ask myself questions: "How much of this is freedom? How much of this is familial obligation? Even though they are living in a different world, how much is necessity for the family?"

As someone coming from a different idea of responsibility and obligation at the age of these participants, I questioned the freedom students had with regards to the lack of a curfew and their ability to spend all hours around town. I referred to this White southern settler value set in the preface, however I will revisit the idea here. As a White southern settler, I have had the luxury of having my family settled in Canada for several generations. I have parents who both worked professional jobs five days a week and who pushed me to realize the importance of school punctuality and attendance; this emphasis on school that was my major responsibility as I was growing up. In my own upbringing, and in the lives of friends around me, the passage to adulthood appeared to happen later in life than for the participants in this study, who appeared to be given greater freedom and obligations than anyone in my circle would have.

With this in mind, the shock I felt to my White southern settler value set when I saw young children spending most of the night out in the community is understandable. There are countless considerations—the responsibility to take care of younger siblings, as mentioned above, and the seriousness of relationships, to name another—that seem to reflect the Inuit youth's control over their own lives. They are seen as important members of their community—with the responsibility and obligation that comes along with that. However, in school, which is still deeply set in White southern settler values itself, the Inuit youth appear to be treated more as children and not respected as learners or responsible family and community members.

Based on the data in this study, the major reason for engagement with video games became clear—autonomy. Many examples demonstrated their control of the games and how this leads to increased persistence and engagement. This sense of control begins

the moment the game loads; in fact, it even occurs earlier. I related how participants' choice of games echoes their personal interests: a high-ranking member of the army cadet corps chose war games such as *Call of Duty*; a music lover and dance enthusiast chose *Just Dance* games, etc. Young people prefer activities they enjoy to those into which they are forced or to which they have no attachment. The website *Expert Learners*, run by ID 4 the Web, an organization that creates instructional and learning materials, states that what makes an expert learner different from others is that they "control the learner process rather than become a victim of it" (Heck & Wild, 2011). In the examples where learning is the most natural—hunting, survival skills, team sports, and video games—the Inuit youth are able to actively participate in areas of interest and enjoyment. This enjoyment leads to extended learning opportunities as the youth try to master the skills involved in the activity. As Ferguson and Olson (2013) note, gaming is not something that is done to the youth but is internally motivated and chosen to fulfill important needs.

In these introductory moments with the game, the young people evaluate their skill set and comfort level with the game content (genre, familiarity, etc.) and then select their own difficulty level. One student told me how he goes straight for "legendary difficulty" because he wants to challenge himself as much as possible. They do not have an outside force (such as a teacher) who may know them little decide whether they should attempt basic or expert gameplay.

Gamers expressed an affinity for the hands-on nature of video games. There is no steep learning curve because the participants are introduced to the gameplay bit by bit until they become an expert in the game world. Earlier I mentioned the Inuit strength of working with their hands, and in gameplay it seems no different. One student noted, "I

like controlling. I like playing with controls. I like doing stuff with my hands." With regards to the pick-up-and-play learning and gameplay, a participant made the comment that you "just go through the controls and look at the screen. Just say that it is shooting and I didn't know, then I would press it and I would be like, oh, that is shooting."

As for engagement, the youth often spoke of their ability to advance through gameplay in a variety of ways—in any ways they could imagine. There was no one right way to succeed within the game—some combat the gameplay head-on while others attempt it from a distance. A student expressed a method of combatting a difficult part of the game: "Um, I would get mad at first. Just shut it down, wait for . . . tonight and then start playing again. [I] think of what I am going to do." This allows the participants to continue at their own pace. If frustration sets in they are able to step away from the game for as long as they like and return to it when they have decided on a new approach.

Another participant said that "instead of trying to go forward, this time I go a bit backwards." If we were to look at this notion from a school perspective, this control would not be there. If a student got frustrated and left the classroom, the student would in all likelihood be seen as problematic or troublesome. One gamer noted that a response to being frustrated in school is to "shut myself down. Yeah, so you would be in class but not really there." This falls in line with other researchers who note the difference between frustration in school as opposed to the game world where players respond to adversity with excitement and interest (Salminen & Ravaja, 2008) while remaining relentlessly optimistic of their chances of attaining their goals (McGonigal, 2011). Anderson (2007) noted that games might be able to "work in the lives of indigenous learners to mediate

tensions between learning that is ‘doable’ and learning that is ‘frustrating’ . . . between learning that values a cycle of community expertise, and one that undermines it” (p. 7).

Following this same thread, game players are in control as they have the ability to seek out solutions from affinity groups on the Internet, from family and friends, and can, in fact, pass the controller to their friend who may be able to move them forward. Inuit have survived for centuries by working together, yet in classrooms students are tested on their ability to work individually on a problem. This is foreign to the youth who, in their daily lives, would seek out the person best able to help them in any given situation. When asked what they would do at a difficult part of the game they said they would “ask a friend if he can help me.”

The trees

(b) Competition

In the discussion on the importance of competition and its effect on the level of engagement for Inuit youth, it is important to provide some context on competitive and cooperative gaming in general. These two concepts can be defined as goal structures: (a) competition means you attain goals only if others do not; (b) cooperation occurs when people attain goals only when others gain the same achievements (Peng & Hsieh, 2012). In video games, there is both a competitive and cooperative element, although it usually leans toward the competitive side. The competitive portion of the gameplay usually pits players against either the computer artificial intelligence (AI) or other players. On the cooperative side of games, you possibly find yourself allied with “non-player” characters (NPC) or other players either with you or online.

Researchers have studied these two concepts and their effects on motivation and engagement. Findings indicate that competition is a common strategy for motivating people (Vallerand & Losier, 1999), that it can actually hinder motivation (Song, Kim, Tenzek, & Lee, 2010), or it could have a positive effect on motivation, depending on individual differences and the task in question (Epstein & Harackiewicz as cited in Peng & Hsieh, 2012). El-Nasr et al. (2010) note that although cooperative gaming has been around for a long time, little research has investigated its impact on the player's motivation. In this present research, evidence has shown that the participants usually found video games engaging, in part, because of both competition and cooperation.

Vorderer, Hartmann, and Klimmt (2003) argue that competition is the aspect of video games that offers the greatest explanation for engagement. There are potential positive and negative results from encountering competition in video games. When gamers encounter competition, either from the challenges of the game itself or from the social competitions of multiplayer gaming, "the result affects both the emotional state of the player and the subsequent game situation: a successful completion will lead to a positive affect . . . emotional state leads to an euphoric experience of enjoyment . . . an increase of the motivation to continue the playing process" (p. 2). However, "a dissatisfactory outcome will elicit adverse emotions (anger and frustration)" that can "diminish the entertainment experience" (p. 2). In my experience, the participants have encountered far more dissatisfactory outcomes with their education than with gaming, and this has led to frustration and, to a lesser extent, anger. Vorderer et al. (2003) consider the competitive elements of games to be the most important factor that determines the level of enjoyment a player displays. Competition, when successful, can prove a powerful

motivator for increased engagement and focus for the game player. However, when unsuccessful, "would cause negative emotions and reduce the enjoyment . . . for this reason, many games allow for adjustments of difficulty levels in order to regulate the probability of success and failure in competitive situations according to the player's skill" (Vorderer, Hartmann, & Klimmt, 2003, p. 3).

Conversations with and observations of the Inuit youth reveal that they enjoy and thrive on competition. It appears that they are happiest when they are directly competing, whether it is in sports (volleyball prowess is particularly important in this community), hunting, or, as I found in this research, video games. The only time I have not observed this appreciation of competition is when they are in school. Competition in school brings in many factors that go outside the fun, friendly competition that is experienced in video games. Competition in a school environment feels different for the participants and community members. Grading, marking, and overall performance in school can be seen as a judgment by an authority figure—who often happens to be a White southern settler with a completely different value set. Schools are fraught with conflict for the students. Teachers and Inuit youth do not share the same beliefs about learning; the culture of the community is often at odds with that of the educational system; there is a significant knowledge gap among students; and students who do succeed in the school system are often ridiculed by fellow students and community members. Throw into this convoluted situation the idea that those who succeed could be seen as aligning more with the southern Canadian teacher and the English language than with Elders and the *Inuktitut* language and it is easy to see why students are not comparing marks and patting themselves on the back for success in the classroom.

In my experience, little or no competition occurs in the classrooms of the school. The only exception appears to happen within gym class, where competitive sports continue to be taken seriously. This lack of competition appears to be an attempt by the youth to protect themselves from the struggle between the community, including parents and grandparents who do not trust the education system, and the school that represents this system in the community. This seems to go hand in hand with the lack of motivation and engagement in school that I have alluded to throughout this document.

The Inuit youth I questioned about their video gaming experiences and preferences often commented on the ability to compete with their friends, show their skills, and add new challenges to the game. “You have already finished it [the game] and you get someone else to play with you to see who is the better of the two of you type thing”: here, one of the participants is outlining how they seek out competition and aim to be the best. I have observed that the Inuit are a proud but modest people who try not to boast too much about their abilities but are more than willing to strive for excellence in certain competition-based fields. Whereas in school they speak of not wanting to be better than others or not wanting to brag if their marks are better, in gaming, participants mentioned often the fun of “challenging others” and “trying to get the most points.” When asked if they simply enjoyed playing the game on their own or if they preferred competition, some participants noted that they enjoyed “competing with someone else” much more and that this led to more “fun, more challenge.”

Competition has been one of the pillars of the powerful gaming industry since its inception. It was originally more about being side by side, two players pitted against each other, but it has now grown to include four to eight players on the same machine, or

countless players if they use the online multiplayer modes that are widely available now. This competitive aspect of gaming is one of the factors that leads to the continued engagement and motivation of Inuit youth gamers.

(c) Contextualization of the game world

Gee introduced the idea of "situated cognition," which theorizes that human learning is not just inside the mind of a person but is instead "fully embedded in a material, social and cultural world" (Gee, 2007, p. 9). Participants in this study often outlined aspects of the poor learning environment they encountered in school as they attempted to outline what it was about games that motivated them and allowed them to succeed. As indicated earlier, participants noted that in school "people tell you what you are doing wrong and in [the] game they don't tell you what you are doing wrong" and with respect to the poor learning environment they encountered in school they said that it is the "most hard work" with feedback that is "just the paper" from "teachers who do not explain it well." The game worlds in which they enjoy spending their time are well crafted by what Gee calls "practical theoreticians of learning since what makes games deep is that players are exercising their learning muscles, though often without knowing it and without having to pay overt attention to the matter" (p. 2). These game worlds provide a specific learning environment that offers guidance and feedback for the learners, along with carefully created situations, to help the learner become proficient in the required skills for the game (Guralink & Levy, 2010).

All aspects of the game world, the "course material" if you will, are contextualized. Every task is a part of the larger world and you know exactly what you

have to do, why you are doing it, and how it will impact your character's success. One of the participants spoke of how, in "the game . . . you actually see your challenge," you see it in "three dimensions on TV." Because game players are reminded so often about what they are doing and why, they are willing to remain in the game world "collecting stuffs like rings and those kinds of things."

With this contextualization, the game players are able to seek out ahead of time exactly what is required of them and to work toward the game goals. In modern games, achievements, trophies, or accomplishments mark certain goals being met throughout the game. One student discussed the importance of this feature to his engagement: "every time I start playing a game I would search the achievements and start working towards them." Another student remarked that after acquiring these accomplishments, "then you knew you are pretty good." The players know what is required from the start, they know the amount of work they put into it, and when they reach a goal, they are immediately notified.

(d) Self-efficacy

Underlying all factors that led to increased engagement and motivation for Inuit game players is self-efficacy; players believe they are able to succeed at the task on which they are working (Bandura, 1977). They feel they have the required skills to meet a particular objective. All of the above-mentioned factors that lead to engagement in games for Inuit youth have this golden thread of self-efficacy woven throughout them.

Overall, the game players' sense of control is the major factor that leads to increased engagement. Self-efficacy is "self-reflectiveness about one's capabilities,

quality of functioning, and their meaning and purpose of one's life pursuits" (Bandura, 2001, p. 1) Furthermore, "[P]eople's beliefs in their efficacy influence the choices they make, their aspirations, how much effort [and] . . . how long they persevere in the face of difficulties and setbacks" (Bandura, 1991, p. 257). The sense of control and the ability to decide which way best suits them along with the ability to choose a preferred difficulty level led them to believe that they will be able to succeed. They may not be able to finish the game at the most difficult setting, but they will be able to proceed comfortably through the game with the confidence that they can succeed. Many modern games allow a player to change difficulty levels on the fly when a particular portion of the game gets too challenging. Instead of hitting an obstacle that is insurmountable and frustrating, a player can receive extra scaffolding from the game to ensure success. This feature in no way diminishes success; it does not say the player finished the game on a lower. The player can still experience all the game has to offer, and in many cases the ability to finish with the additional help from the game encourages players to go back and try to complete the game on a more difficult setting.

For these Inuit youth, I believe the parents' encouragement of and participation in gameplay aids in the development of self-efficacy. There is a lot of negative history between the school system and the Inuit; the parents of the community express ambivalence about schooling. Success in the school system leads to the potential for youth moving out of the community or being labelled as *qallunaaq*, teacher's pet, etc., and there may be feelings of guilt arising from it. By encouraging the young people and participating in gameplay, parents demonstrate a different perspective than when the

school system is involved. The youth may believe it is acceptable to succeed in this system—which would contribute to the development of self-efficacy.

The cooperative nature of the gameplay also instils self-efficacy. Receiving help (for example, asking someone else to complete a section, or watching a walk-through of the best practices for the game) is encouraged and permitted. If the participants have a fear of failure and so do not start a project or even try to work on it, there is no way that self-efficacy can be fostered. However, if players know that they can approach a problem in a different way, they can take ownership and assume control and even seek out others to help them through the game. No one tells a player seeking help that they are not gaming appropriately—there is an entire industry of people who share gameplay videos with helpful techniques to help people succeed.

The contextualized and step-by-step practical tasks of the game are organized in such a way that participants begin to believe in their ability to succeed without even truly recognizing it. You start with small, trivial tasks that teach the skills in easy steps before testing you with a larger task that requires all the skills you have learned up to that point.

Conclusion

This research has helped reveal connections between the traditional Inuit approach to teaching and learning known as *isumaqsayuq* and the more modern technology of video games, which many scholars (Gee, 2007; Prensky, 2001; Shaffer, 2006; Squire, 2011; Whitton, 2010) have argued display strong learning principles and educational potential. This present study found that for the Inuit youth in one community in Nunavut,

Canada, video games are a technology of learning and that multiple factors led to their increased engagement with the games. The question this sets up for the final chapter is: Now what? This study has set out to determine what, if any, learning characteristics and preferences the Inuit youth demonstrate in their analysis of their gaming sessions that could help improve their overall experience in education and learning. This research has been guided by the idea that there are themes and concepts at "play" during the participants' interactions with video games that could suggest more effective approaches to teaching and learning in Nunavut's classrooms. The final chapter will provide an example of how these classrooms might function with this information.

Table 5.1: Evidence of Correlation Between Gee's Principles and Pillars of Isumaqsayuq

Gee's Principles	Isumaqsayuq Pillar:	Evidence
1) Probing Principle: "Learning is a cycle of probing the world (doing something); reflecting in and on this action and, on this basis, forming a hypothesis; reprobing the world to test this hypothesis; and then accepting or rethinking the hypothesis" (Gee, 2007, p. 223).	1) Play, drama, and "interrogations"— Inuit youth were asked specific questions, given simulations of important events, in order to get them to think about how they would react and what they would do if these things happened.	• Nearly all students identified their methods of succeeding in games as "try and try again" and "rethink and try new techniques" approaches. • One participant said when frustration with the game occurs, he leaves the game, thinking of new approaches while away from the game, and then attempts his new approaches upon his return. • "Like instead of trying to go forward, this time go a bit backwards and look for . . ." • "Will go back and try to find new, better weapons."
2) Regime of Competence Principle "The learner gets ample opportunity to operate within, but at the outer edge of his or her resources, so that at those points things are felt as challenging but not 'undoable'" (Gee, 2007, p. 223).	2) Backwards chaining— The idea of having young people complete the final portion of difficult tasks such as the final stitching on a pair of *qamiqs.*	• Most participants listed "challenged" and "excited" as two of the things they feel when playing video games. Upon further probing, students gave definitions of challenged as "hard but not too hard," and "difficult but not undoable." • "A challenge is something difficult *but* you can still do it." "Makes you want to keep going and try harder."
3) Psychosocial Moratorium "Learners can take risks in a space where real-world consequences are lowered" (Gee, 2007, p. 222).	3) Safe, risk-free environment	• Participants report enjoyment in seeking solutions to puzzles and challenges. • They report not needing to worry about being labelled a nerd, geek, or teacher's pet for showing interest. • Students do not worry about making others feel bad if they are "smarter" than them in the game. "'Cause in school when you finish first I think people get disappointed 'cause they did not finish it as fast as you did." • "I try not to challenge people with the skills I have [in school]."
4) Situated Meaning Principle "The meanings of signs are situated in embodied experience. Meanings are not general or decontextualized. Whatever generality meanings come to have is discovered bottom up via embodied experiences" (Gee, 2007, p.224).	4) Contextualized learning— The contextualization of learning was not a conscious choice of traditional Inuit education; it was what the Inuit did. The Inuit used the tools and knowledge at hand in practical tasks around the camp in order to help the family survive.	• "Reading is just words on paper," "reading is boring." • Words are contextualized—"Prone" becomes associated with button action, action of character on screen."Like in *Call of Duty*, word like 'prone' we would press buttons and start going into prone position. In school it is like words, reading, reading the stuffs." • "Because of the game you actually *see* the challenge."
5) Insider Principle "The learner is an 'insider,' 'teacher,' and 'producer' (not just a consumer) able to customize the learning experience and	5) Backwards chaining (see above)	• Multi-age gaming sessions (could include people of ages from 30s down to a 9 or 10 year old) give opportunities for the older students to become teachers/experts/insiders. • Cooperative teamwork in these multiplayer maps have students calling back and forth to each other directing where to go, what

domain/game from the beginning and throughout the experience" (Gee, 2007, p. 227).		techniques to try, etc. These gaming sessions may have teams of several high school students and an elementary or junior high student or two.
6) Ongoing Learning Principle "The distinction between learner and master is vague, since learners, thanks to the operation of the "regime of competence" principle listed next, must, at higher and higher levels, undo their routinized mastery to adapt to new or changed conditions" (Gee, 2007, p.227).	6) Backwards chaining (see above)	• Create *Halo* multiplayer map designs after completing the main game missions and the pre-packaged multiplayer maps. • New players, new strategies playing *Halo*—need to rethink mastery. • "The team approach is better because it is always challenging . . . challenging opponents." • "I will play at the normal to get the feeling of it, then go to the hard to get the feeling of it, and then go to the insane or the highest level." • "Yes I have finished a game and tried to finish it on a harder level because I want to challenge myself."
7) Incremental Principle: "Learning situations are ordered in the early stages so that earlier cases lead to generalizations that are fruitful for later cases" (Gee, 2007, p.225).	7) Observation and imitation—Inuit youth learned by watching their parents and Elders perform tasks and then went on to imitate the adult successes.	• In video games, the challenges and objectives are clearly shown, immediately recognized when completed, and all working toward a perceived ending. • In school, objectives and challenges are not seen this way. It is what the teacher tells them they have to learn. There is not a definite end in sight.

Table 5.2: Gee's Principles Evident in Research Analysis

Gee's Principles	Analysis
1) Incremental Principle: "Learning situations are ordered in the early stages so that earlier cases lead to generalizations that are fruitful for later cases" (Gee, 2007, p.225).	Aspects of Gaming That Lead to Success: The incremental principle occurs where learning situations are ordered within games so that the earlier events lead game players to form generalizations about the game world that will benefit them later in the game. Within the game, everything they encounter teaches them about success, so that as they proceed they build background knowledge that allows them to form conclusions on how to proceed. It is very difficult for the students to feel successful when they are not able to learn the skills necessary
2) Concentrated Sample Principle: "The learner sees, especially early on, many more instances of fundamental signs and actions than would be the case in a less controlled sample. Fundamental signs and actions are concentrated in the early stages so that learners get to practice them often and learn them well" (Gee, 2007, p.225).	Aspects of Gaming That Lead to Success: Video games include tutorial stages, hint systems, and the ability to change levels of difficulty in mid-game. This guidance from the game system ensures the level of frustration does not exceed your belief in your own ability to succeed.
3) Self-Knowledge Principle: "The virtual world is constructed in such a way that learners learn not only about the domain but about themselves and their current and potential capacities" (Gee, 2007, p.222).	Analysis of Learning Strengths: Participants discussed the difference in delivery methods and their impact on their personal learning: "a teacher gives you this exam and they tell you to do this and that but looking at a paper it is really, really boring. Like if teachers bring in a huge flat screen TV and it had exam questions on it I know I would get the right answer right" and "because of the game you actually see your challenge."
4) Cultural Models of Learning: "Learning is set up in such a way that learners come to	Analysis of Learning Strengths: Participants discussed why they struggled more with

think consciously and reflectively about some of their cultural models of learning and themselves as learners, without denigration of their identities, abilities, or social affiliations" (Gee, 2007, p. 31).	learning at school. They noted that in school "people tell you what you are doing wrong and in [the] game they don't tell you what you are doing wrong they just make you do it over and over" and that the "teacher go through this . . . till we literally know how to memorize it . . . takes a while. And the games just do it once and you go past that and its stays there, we easily remember how and when in school we do not exactly know how."
5) Active, Critical Learning Principle: "All aspects of the learning environment (including the ways in which the semiotic domain is designed and presented) are set up to encourage active and critical, not passive learning" (Gee, 2007, p. 221).	The Importance of Active Learning for Inuit Youth: The youth take on a passive role in school and it anaesthetizes the students' minds as they attempt to regurgitate the material presented to them. As with sports, mechanics, and hunting, when engaging with video games, they take on a much more active role—in fact they are at the centre of every aspect of the game.

Chapter 6: Recommendations and Reflections

As I write this final chapter, I am reminded of why I began this study in the first place. The words that I heard from a former teacher in Nunavut and with which I began this study were, "They're not very bright up there." This statement, in reference to the apparent learning capabilities of the Inuit, was one of the driving factors that led to the lengthy process of conducting and writing this research. Early in *Honouring the Truth, Reconciling for the Future: Summary of the Final Report of the Truth and Reconciliation Commission of Canada* (TRC, 2015) the following point is made: "The educational goals of the [residential] schools were limited and confused, and usually reflected a low regard for the intellectual capabilities of Aboriginal people" (p. 3).

This document refers to the horrible legacy of residential schools and parallels the first words ever spoken to me about teaching the Inuit and their capability to learn. This research, though small in scope, attempts to provide a counter-argument to these statements and beliefs about Inuit and learning. This research, inspired by a hope borne of teaching Inuit youth, shows the strengths of the Inuit as an alternative to the cultural deficit thinking reflected in the words of that former teacher and often replicated, still, in the classrooms of Canada's North.

Furthermore, this study has shown that the Inuit youth are as technologically savvy and modern as any other young people in North America. Along with interacting with and succeeding in video games, they also create their own maps for multiplayer gaming and modify various aspects of their gameplay experiences. These students use the Internet as they research solutions to problems, including those troublesome areas of the

latest video games. It is problematic that these skills, which will prove so important as we become even more technologically based as a society, are not being included in school.

This chapter offers recommendations for what may be done to address the limitations of the educational system in the North, for additional research to move towards more effective Inuit educational experiences, and for continued research into video games and learning among Inuit populations. It offers ideas for developing a system of strength, success, and personal growth for Inuit youth. The recommendations also address educational issues relating to teacher pedagogy, the educational policies that the government expects of all schools, and the curriculum that is taught in the classrooms of the North.

Pedagogy: Incorporation of Isumaqsayuq in the Classroom

This study has utilized the pillars of *isumaqsayuq* as a guidepost. As previously identified, *isumaqsayuq* refers to education that involves knowledge transfer through observing and imitating (Stairs, 1992), contextualized learning, "backwards chaining," (Stairs, 1995), and the use of games, play, drama or "interrogations" (Briggs, 1998). Through this research, there have been noteworthy connections and parallels between the successful learning that is occurring in video games and the pillars of *isumaqsayuq*.

Gloria Ladson-Billings (2014) states that "the secret behind culturally relevant pedagogy: [is] the ability to link principles of learning with deep understanding of (and appreciation for) culture" (p. 77). The findings of this research—that video games are a technology of learning in which success is enhanced by *isumaqsayuq*—leads to a recommendation for increased incorporation of these pillars into the daily activities and

teaching practices utilized in Nunavut classrooms. Though there are many ways to manifest these pillars in a modern schooling system, one example may be beneficial to the renewal of Nunavut schools. Several participants in this study stated that they felt like outsiders in their classroom and in the school building. If a student who is feeling out of place in a school was able to take part in activities that utilized the backwards-chaining pillar of *isumaqsayuq* then there is the possibility that they would feel included and an important part of the class itself. For example, many students I taught were quite good at spelling and the use of conventions of the English language due to the ease with which worksheets can be used to teach them. In an English class, a backwards-chaining opportunity would allow students to take on the role of editor of essays. Students who have not taken part in the development of ideas or the writing of the essay proceed to the final step in the essay writing process. This approach relies on the strengths with which the students enter the classroom and offers them an opportunity to experience progress, accomplishment, and pride.

Game Characteristics in the Classroom

This study outlines several factors that can inform teaching pedagogy used in northern communities. The research found that video games were a technology of learning for Inuit youth. By looking at what characteristics of the games led to increased engagement and motivation for the participants, this study also identified factors that might increase interest, motivation, and success in educational settings. These factors address the areas of policy and curriculum in educational settings. The factors of (a) module-by-module growth, (b) autonomy, and (c) frequent and relevant feedback all

should be addressed in school guidelines, while a fourth factor—relevant and practical subject matter—is a recommendation relating to the curriculum taught to the Inuit youth.

Learning

(a) Module-by-module growth

One aspect of gaming that appears to lead to an increased sense of success for participants in this study was that the game does not allow a player to proceed until the skills being taught in a particular level or challenge are attained. This idea could prove to be an effective approach to teaching Inuit youth. A major issue in Nunavut education is absenteeism, which results in students missing significant portions of the material required for success. This loss of classroom time leads to students attempting evaluations on material for which they have no firm foundation and, therefore, to a diminished chance of success.

This research shows that a major reason why Inuit youth remained engaged and motivated to succeed in games is the feeling of success within the game. I have observed a teacher who structured a course in modules so that students, upon missing large portions of the course, did not return to class to study the same module as a student who had been regularly attending. Instead, their module was kept in the school, and then upon their return they resumed working where they had left off, thus ensuring that students were not missing important skills and knowledge that would be required to understand later portions of the course. This teacher was often seen as ineffective because of the length of time taken by students to complete a course, but the alternative appears to be to push students through without mastering the necessary content.

This idea of module-by-module growth, or self-paced learning strategies, is not new. It can be traced back to the Keller Plan (Keller, 1968) which "spells out learning objectives for students and utilizes operant learning principles" (Mak & Georges, 1997, p. 835). The Keller Plan in many ways mirrors the reasons why the level-by-level growth of video games seems to resonate so much with the participants of this study. In the Keller Plan, "students get immediate reinforcement for successful achievement and feedback to enhance learning. They are required to master an easy module before progressing to a more advanced one and have access to tutorial assistance for additional feedback and support" (p. 835). In 1988, J. C. Bowles looked at the potential benefits of computerized, self-directed learning and found that they include improved motivation among students, the ability to work with a level of autonomy from teachers, as well as the ability to attempt solving problems multiple times (Bowles, 1988).

There is a connection here to the ideas expressed by Maria Montessori (1936) about how children should be educated. Montessori believed that the teacher should allow children to operate independently and should work to provide materials that foster this sense of independence. This study has looked at the need for Inuit youth to be educated in a manner that best suits their learning strengths and strategies. Within the same classroom, there may be many individual learning strengths and strategies that are not being considered in order to save time. This module-by-module growth, though time-consuming, would lead to more effective learners who are experiencing greater successes. For those students who do not attend regularly, it allows them to move forward at their own pace and allows for success. For those that do attend regularly, module-by-module

growth would allow the students to ensure they master content before moving on to the next module and therefore would allow a firmer grasp of the course material.

(b) Autonomy

Deci and Ryan (1987) argued that three human needs must be met if we are to experience optimal learning. These needs are competence (students need to understand the content), relatedness (students' need for belonging, personal support and a sense of security in school settings), as well as autonomy (students' need for latitude over decisions in school relating to starting, stopping, reconstructing, and changing school activities) (as cited in Stefanou, Perencevich, DiCintio, & Turner, 2004). While this research has shown that each of these needs is not necessarily met in the educational experiences of the participants in this study, they each seem to be found in their interactions with video games. In fact, the last need mentioned—autonomy—was one of the most important reasons why these games increased the engagement felt by the youth. In an educational sense, it is argued that "autonomy is thought be best supported through the provision of choice and the removal of external controls, such as pressures or rewards" (Deci & Ryan as cited in Stefanou et al., 2004, p. 99). Furthermore, the "goal of educators is to create and foster classrooms that support students in becoming truly autonomous or self-determined as learners" (Stefanou et al., p. 99). This research found the environments in video games created this for participants in the study and it supports the recommendation that a version of the environment be created in formal educational settings.

The module-by-module growth example mentioned above demonstrates the potential importance of another game characteristic—a sense of autonomy in learning—for educating Inuit youth. For example, each student who enters or is absent from school has unique strengths, needs, skills, and knowledge. If these students can approach their studies with the ability to take as much or as little time as they require to learn the course material, then they would feel a greater sense of control over their learning. If they are given the opportunity to analyze their schooling, then they can understand how best to learn for themselves. This autonomy that comes from taking their own approach to learning is similar to the autonomy gamers have when choosing difficulty settings and seeking hints.

In the games the participants spoke of, they experienced autonomy in many ways, from designing a character to choosing the difficulty level to proceed through the game. One study cited earlier indicates that gaming is not something that is done to the youth, but is instead internally motivated and chosen to fulfill important needs (Ferguson & Olson, 2013).

(c) Frequent and relevant feedback

A further recommendation for educating Inuit youth is more frequent and relevant feedback. With video games, the game often explains exactly what challenge or level you are currently on, or when you have completed it. You know exactly where you are and what you have to do. The accomplishment systems utilized in gaming give participants a frequent measure of how well they are doing and what they need to do to succeed further in the game world. Most participants mentioned this type of "just in time" feedback—

especially the accomplishment systems—as an enjoyable aspect of gaming that kept them engaged and motivated to proceed.

In the 1970s, Milhaly Csikszentmihalyi found that a person's skill combined with the difficulty of their task resulted in different cognitive and emotional states. When these two factors balance, you head into an enjoyable experience fully committed to the activity. One of the characteristics of the flow experience is clear and timely feedback—it is sought by gamers because of "our innate learning and conditioning mechanisms" (Barron, 2012). Barron goes on to note that "feedback that occurs directly after or midway through the completion of an action leads to the formation of the strongest associations between action and outcome" (Barron, 2012, p. 3).

In my experience, students often demonstrated a lack of understanding of the meaning of the grades on report cards and on tests. Feedback needs to be relevant and meaningful and to consist of more than simply test results and report cards with arbitrary comments added. Why not give students an understanding of how their courses and the concepts taught are helping them become strong citizens for their communities? Progress reports at least monthly would help students understand exactly where they are in their studies (what challenges they have completed and what ones they are now working on) and help them to move forward. As an example, at the beginning of a year students could outline *their* goals and outcomes that they wish to achieve. There has been some progress in the area of student goal creation in the only totally Nunavut-developed course taught in the territory—*Aulajaqtut.* This kind of thinking and development is needed throughout the entire school system. Progress reports could review individual student goals and

adjust them if required. This added sense of relevance would have students thinking differently about education and its potential impact on their lives.

Curriculum: Practical and Relevant Content

Game players always understand what goals they are pursuing in the game and how each skill or object fits into the larger plan for the character's trajectory. Every mission, challenge, and conversation undertaken within the game factors into success. Inuit youth do not commonly experience such clarity and focus in their academic pursuits. Instead, there are abstract goals and concepts, which are not sufficiently demonstrated as relevant or practical within the participants' daily experience. If the approach to education were based on what students needed to live a successful life in their communities and their territory, the relevance and practicality of the information would lead to renewed interest and engagement in their educational career.

A science and culture five-day camping experience based on one strand of the high school science curriculum is one such example. Students had to demonstrate their interest and experience in science and culture in order to be chosen to attend the camp, which included students from an entire region in Nunavut. Three different content focuses cycled every three years: rocks and minerals, archaeology, and ocean and water systems. The students would learn this content while out "on the land" where real-life examples and uses of the material were hands-on. Practical and relevant content also was used to encourage learning through attending to and completing practical tasks around the home in pre-European contact Inuit settlements. This camp is another example where the

principles of *isumaqsayuq*—in this case contextualized learning—are present in successful learning activities for Inuit youth.

Another successful, competitive, and enjoyable contextualized learning experience in Nunavut schools occurred during the Science-Engineering-Technology (or SET) challenge that took place each year. It was an afternoon where all students used their knowledge of science to attempt solutions to a problem or to produce the best example of a product. Students were given a specific set of materials and asked to produce something, for example, an apparatus to safely contain an egg dropped from a great height. Though one might ask how this was relevant to their lives, this anecdote deals with the practicality and hands-on approach of the learning environment. The students were briefed on the concept(s) necessary to complete this activity and then allowed to apply the information in any way necessary to successfully complete the challenge. This type of project would be a fantastic end-of-module assessment to see if students had understood the concepts. This parallels the findings of this study that showed the students enjoyed challenges when they understood why the challenges existed and knew that they had covered the content and obtained the materials necessary for success.

This section has provided recommendations stemming from the research and how it could contribute to the creation of a greater sense of success, self-efficacy, and motivation in Nunavut's classrooms. The integration of the pillars of *isumaqsayuq* along with the implementation of certain important characteristics found in video games (module-by-module growth, relevant and practical subject matter, autonomy, frequent and relevant feedback) into the classrooms could have a positive effect on the educational

experiences of Inuit youth. In the next section, I will recommend avenues for additional research that can stem from this present research project.

Recommendations for Additional Research

This research points to a connection between success in learning for the Inuit youth and how closely the teaching of the task mirrors the principles of *isumaqsayuq*. Anecdotally, I have seen the *isumaqsayuq* pillars in areas where Inuit success in learning and self-efficacy appear strong: sports (both traditional Inuit games and modern sports), machinery, and hunting. This research has looked closely at how these pillars are evident in successful learning in video games. Additional research that looks closely at the presence of *isumaqsayuq* in examples of successful Inuit learning would be an important extension of this present research.

This research involves a small percentage of the population of high school students in one community in Nunavut. Additional research could be carried out in smaller communities as well as major centres throughout the North. This additional research would determine if this research is consistent with the experiences of other Inuit youth and to see what other factors may create a more positive school environment for the young people of northern Canada.

As I began to frame this research, the original idea involved administering questionnaires to junior high as well as senior high students in the community, but I chose to focus solely on the grade ten to twelve students. I later regretted not asking for participants in grades seven through nine in order to get a deeper pool of data. Many of the junior high students spend more time with video games than the senior high students,

who may be busy hunting or caring for their families, among other things. These students have also not yet encountered the credit system that delays success for many senior high students. Further research should take place with the junior high demographic, as they may have their own interpretations of why video games are effective learning tools and what factors led to their engagement and motivation in the games.

It would be interesting to see how this research would fit in with research where video games are actually utilized in the classroom. The previous section of this chapter has shown aspects of video games that can be transferred to the classroom and could lead to increased engagement and success for students. These factors could indeed have a profound effect on the educational experience of students in the North, but if games designed by Inuit educators and Elders and designed for Inuit students could be used in the classroom, would this bring together all factors outlined as reasons for increased learning, motivation, and engagement into the education of the North? Additional research with the use of video games in classrooms in the North could provide further insights into whether the findings of this study hold: Are students able to grasp and to apply educational concepts more effectively? Does their increased motivation and engagement associated with video games as found in this research dissipate when the games themselves are a part of the educational setting? Does the finding of this research, that video games are a technology of learning, still hold true when the games are utilized for a purely educational purpose?

Afterword

This research has taken a long time and many times I have had to go "back to the drawing board." My initial answers to my research questions and the recommendations that I felt were needed for education in the North were different from the answers and recommendations I have presented in this paper. In many ways, the length of time this study has taken was necessary in order for me to arrive at the truth behind the words of the participants.

What I have learned, both personally and professionally, throughout this study has become part of my actions and beliefs in the classroom and in society in general. This research has provided me with a series of concepts and a vocabulary that allows me to explain the importance of being culturally responsive and allows me to address social justice issues that arise in my classroom and school. In the past few years, I have taught social studies, religion, and ethics courses, all of which have required me to produce examples, theories, and articles that are not a part of the recommended readings. This research has given me the words to address my students' questions about the Islamic state that point to underlying prejudicial and racist misperceptions. I have learned that students are looking for a deeper understanding of these issues than their textbooks provide. I am grateful that this research has allowed me to be more culturally responsive to all minority groups as my students approach me regarding widespread controversies and biases.

This research has also added terminology and concepts to my vocabulary that better explain the importance of video games and why they are not simply killing simulators. I feel better able to address the issues of video games in a well-informed manner, and the work of James Paul Gee will continue to be an inspiration. His work with

video games began when he sat down to play these games with his son, and now I use his observations and theories as I teach my own son how to play games. Additionally, because I am a lifelong proponent of technology, this research has increased my confidence in the use of technology in the classroom. My search for a topic for my master's thesis began with the question of whether the learning that takes place today with the aid of technology is superior to the learning that took place when memorization seemed to be the sole goal of learning. I spoke tentatively of this idea early on, but by exploring the research questions in this study, I found a level of confidence that my technological focus was helping my teaching and helping my students learn in a way more appropriate for them. Additionally, throughout this research I have come across teaching strategies and methods that utilize gamification elements, such as *Kahoot*, an online testing program, or *Classcraft*, an online avatar-based class management system, and have added new elements to my classroom.

Overall, this research has left me with the knowledge and skills required to critically reflect on my classroom, my students, and society, in general. As a teacher, I have always been reflective, but this study has added deeper layers to my questioning and understanding that I feel are necessary for being an effective, culturally responsive, and thoughtful teacher in today's school system. Through working closely with the Inuit youth as we conducted this research, I have also come to realize the reciprocal nature of teaching and learning. While this study aimed to provide a positive learning environment for the students of Nunavut, their impact on me as an educator has been transformative. Their teachings have gone well beyond Inuit legends, traditions, and skills. They have also taught me an expanded awareness of compassion, empathy, humility, strength and

perseverance. These lessons will follow me throughout the remainder of my career and into every classroom I enter.

To conclude this chapter, I again look to *Honouring the Truth, Reconciling for the Future* (TRC, 2015). There are a number of calls to action relating to all aspects of the lives of Indigenous people in Canada. These calls to action include to "draft new Aboriginal education legislation with the full participation and informed consent of Aboriginal peoples . . . [to] close identified educational achievement gaps within one generation . . . improving education attainment levels and success rates . . . [and] developing culturally appropriate curricula." My recommendations for game characteristics in the classroom and for further research are offered in the hope that they could help as we move forward together to provide a more effective and fulfilling educational experience for Indigenous youth as part of long overdue and productive responses to these calls for action.

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Appendices

Appendix A: Letter of Information

Faculty of Education
St. John's, NL Canada A1B 3X8
Tel: 709 737 3403 Fax: 709 737 2345
www.mun.ca

Letter of Information
Parents/Guardians and Student Participants

My name is Jeremy Chippett and I have been a teacher at ******* School for the past 5 years. I am also pursuing a Masters Degree in Education at Memorial University located in St. John's, NL. As a requirement for this degree, I am conducting research that I hope will help create a better educational experience for Inuit students. This research will investigate how it is that Inuit high school students learn and if digital game-based learning might prove to be an alternate teaching methodology in northern schools. Would you be interested in participating in this study?

This study will:

- Gain a better understanding of how Inuit learn
- Investigate Inuit gaming practices
- Explore digital video games as an alternate pedagogical approach for Nunavut schools

All high school students of ******* School will be offered the opportunity to take part in this research. If you agree to participate in this study, you will complete a questionnaire, in either Inuktitut or English, regarding your experiences with video games. After this questionnaire, you may be asked if you would like to take part in a one-on-one interview with the researcher. This interview will take 30-45 minutes outside of school hours and will include questions such as: What do you like about video games? Do you feel that video games teach you anything? What strategies do you use to complete a game? How do you learn how to play a new game? You will be asked to give your thoughts on gaming though you will not have to answer any questions you do not feel like answering.

This research may prove beneficial to you as your thoughts and ideas regarding gaming can help outline its potential as a learning tool in Nunavut. Perhaps the ideas that you give as a part of the research will be used by the Curriculum and School Services department to aid in their Made in Nunavut curriculum. Your opinions may be utilized to create a better educational experience in Nunavut. Furthermore, there has been a great deal of research conducted regarding the positive learning effects of video games. As a participant in this study, you will be adding the Inuit voice and experience to this research.

In order to reduce any potential harm for participants, many precautions will be taken including gaining approval and advice from ******* DEA, ******* School Operations, and ******** School. Furthermore, the researcher will adhere to and respect all Inuit customs including offering all aspects of the research in Inuktitut and English, and seeking advice and discussing traditional Inuit learning with Elders.

If you choose to conduct a one-on-one interview with the researcher, you will have the opportunity to conduct your interviews in Inuktitut or English. If English is chosen as language of preference, the interviews will be audio taped and transcribed entirely by the researcher. If Inuktitut is preferred, the audio taped interviews will be translated and transcribed by a trusted local translator in *******, as suggested by the DEA. All information collected throughout this study will be used solely for the purposes of this research. This data may be used in articles, book chapters, reports, and presentations. Regardless of the format, no identifying information concerning the community, school, or students will be included.

It is important to note that this research is completely separate from your schooling. Therefore, there will be no effect on your academic career whether or not you decide to participate in the study, or if you decide to withdraw from the research at any point after the commencement of the study.

All data collected throughout this study will be secured on the researcher's password protected computer for seven years. The researcher will be the only person with access to this information. At the end of seven years (2018) all the information including transcripts, audio files, questionnaires and information collected during the course of this study will be destroyed.

This research is being conducted under the supervision of Dr. Dorothy Vaandering and Dr. Ursula Kelly of the department of education at Memorial University in St. John's, NL. Concerns relating to the present research can be raised with both supervisors. Dr. Vaandering can be reached at dvaandering@mun.ca or by phone at 709-864-3266. Dr. Kelly may be contacted through email at ukelly@mun.ca or by phone at 709-864-3409.

The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-864-2861

If any questions or comments arise regarding this research at any point during the study, please feel free to contact me at jchippett9@mac.com. This letter and a copy of the attached consent form is yours to keep for future reference.

Sincerely,

Jeremy Chippett
Graduate Student – Faculty of Education
Memorial University of Newfoundland
St. John's, NL

High School Teacher

Appendix B: Consent Form for Student Participants and Their Consenting Parent/Guardian

Faculty of Education
St. John's, NL Canada A1B 3X8
Tel: 709 737 3403 Fax: 709 737 2345
www.mun.ca

Consent Form
For student participants and their consenting parent/guardian

AUTHORIZATION

I have read and understand the letter of information, and I agree to allow my child to participate in this research study. I have attended the public consultations and have been given a chance to raise any concerns and ask any questions that I had. I understand that I will receive a copy of this form. I voluntarily choose to participate, but I understand that my consent does not take away any legal rights in the case of negligence or other legal fault of anyone who is involved in this study. I further understand that nothing in this consent form is intended to replace any applicable Federal, Territorial, or local laws.

Yes, _____[Name] will participate in this study

_____
Signature of **student** participant Date

_____
Signature of **parent/guardian** of participant Date

Researcher's Signature:

I have explained this study to the best of my ability. I have held public consultations to answer any community questions and garnered approval from all relevant community and governing

organizations. I believe the participant understands the purpose of the research, understands it in no way will affect their schooling, and that they have freely chosen to be in the study.

_____

Signature of Researcher Date

The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-864-2861

Appendix C: Consent Form for Adult Participants

Faculty of Education
St. John's, NL Canada A1B 3X8
Tel: 709 737 3403 Fax: 709 737 2345
www.mun.ca

Consent Form
For adult participants

AUTHORIZATION

I have read and understand the letter of information, and I agree to participate in this research study. The purpose and scope of this research has been explained to me and I have been given a chance to raise any concerns and ask any questions that I had. I understand that I will receive a copy of this form. I voluntarily choose to participate, but I understand that my consent does not take away any legal rights in the case of negligence or other legal fault of anyone who is involved in this study. I further understand that nothing in this consent form is intended to replace any applicable Federal, Territorial, or local laws.

Yes, I _____ [Name] will participate in this study

_____
Signature of participant Date

Researcher's Signature:

I have explained this study to the best of my ability. I have held public consultations to answer any community questions and garnered approval from all relevant community and governing organizations. I believe the participant understands the purpose

of the research, understands it in no way will affect their schooling, and that they have freely chosen to be in the study.

_____

Signature of Researcher Date

The proposal for this research has been reviewed by the Interdisciplinary Committee on Ethics in Human Research and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant), you may contact the Chairperson of the ICEHR at icehr@mun.ca or by telephone at 709-864-2861

Appendix D: Questionnaire

How old are you?

a) 14 to 16
b) 16 to 18
c) 18 to 20
d) 20 +

What grade are you in at school?

a) 10
b) 11
c) 12

1) Do you play video games? _____
   If the answer to this question is no, you can turn in your survey.

2) At what age did you started playing video games?
   _____

3) How many times a week do you play video games?
   a. Several Times a day
   b. Once a day
   c. 2-3 times a week
   d. Once a week
   e. Once a month

4) Approximately how many hours do you spend each week playing video games?
   a. 0-1 Hours
   b. 1-5 Hours
   c. 5-10 hours
   d. 10-20 hours
   e. 20 + hours

5) What platform(s) do you use to play video games? (***Choose all that apply)***
   ** A platform is any machine or device that you use to interact with digital video games*

   a. Nintendo Wii/Gamecube/N64/
   b. Playstation 1/2/3
   c. Xbox/Xbox360
   d. Computer
   e. Internet (Flash games/Facebook, etc.)
   f. Handheld (Nintendo DS/PSP/Ipod touch/Ipad)
   g. Other:_____

6) What types of games do you play? ***(Choose all the apply)***
   - *Games are usually put into categories based on the type of play in the games*

   a. First Person Shooters (i.e: Halo, Killzone)
   b. Open World (I.e: Assassins Creed, Infamous, Batman: Arkham Asylum, Zelda)
   c. Role Playing Games (I.e: Borderlands, Final Fantasy, World of Warcraft)
   d. Rhythym (i.e: Rockband, Guitar Hero, Just Dance, Sing Star)
   e. Sports (NHL 2011, Madden Football, MLB 2010)
   f. Puzzle (Tetris, Bejewelled Blitz)
   g. Other:_____

7) Where do you usually play video games?
   a. In a bedroom at your house
   b. In the living room at your house
   c. At a friends house
   d. Around town

8) When you play a video game, is it usually:
   a. By yourself
   b. With other people watching
   c. Playing together **with** someone (Co-op, on the same team)
   d. Playing **against** someone (Competitively – on different teams)

9) Who do you play video games with?
    a. No one – I play alone
    b. Siblings – Brothers, Sisters
    c. Parents
    d. Friends
    e. Other: _____

10) How do you feel when you are playing games? (Check as many as you want)
    a. Excited/hyper
    b. Sad
    c. Angry
    d. Frustrated
    e. Challenged
    f. creative
    g. content/satisfied
    h. Other_____

11) How do you learn how to play a videogame?
    a. Read the manual that comes with the game
    b. Watch someone else play the game first
    c. Look on the internet for instructions on how to play
    d. Learn how to do it yourself as you play the game

12) If you reach a very difficult part of the game, what do you do?
    a. Keep playing the game until you push through the difficult part
    b. Stop playing the game and return at a later time to try again
    c. Stop playing the game and never play it again
    d. Look for tips on the internet on how to pass the difficult part
    e. Ask friends to help
    f. Other: _____

13) Have you ever finished a video game (s) before? Yes/No
    a) What was the name of the game(s)?_____
    b) How long did it take to finish it? _____

14) When you finish a game, which of the following do you do:
    a. Tell no one
    b. Tell all your friends
    c. Tell your family
    d. Other: _____

15) After finishing a game, do you:
    a. Put it away and never play it again
    b. Give it away to someone else
    c. Play it again later to see if you can do better
    d. Other: _____

16) What is the best video game that you ever played?
_____

* Why do you like it so much?
_____
_____
_____
_____
_____
_____
_____
_____

17) What do you like about video games?
_____
_____
_____
_____

18) After finishing a game, what do you do with the game?
_____
_____
_____
_____

19) What do you think you learn by playing video games?
_____
_____
_____
_____

20) Do you think this learning is different from learning in school?
_____
_____
_____
_____

Appendix E: Semi-Structured Interview Guide

The Interview will be semi-structured as this allows the main themes of the research to be addressed and further allows for leeway on the part of the participant in how they choose to answer the questions. The flexibility of the semi-structured interview will allow for all emphasis to be placed on how the participant frames and understands the topics covered. Due to my observation of the general popularity and understanding of video games amongst the Inuit youth, it is hoped that a detailed, deeper, and interesting discussion will emerge as the interview develops.

The one-on-one interview will be conducted at a location in which the participants is comfortable. A copy of the questions will be provided a few days before the interview to allow the participant to be more prepared with their answers. The interview will be recorded using a digital recorder, which will be placed between the participant and the researcher. Participants will be able to choose to complete the interview in the language of their choice. If required, a local translator will be present to ask the questions in Inuktitut and translate the answers for the researcher. The interview will begin with an outline of the reason behind the research, an explanation of the separation between the research and their schooling, reiteration of their ability to withdraw from the research at any time, and the ability to not answer particular questions if they do not wish to.

After the final question is asked, participants will be asked to refer the researcher to any successful gamers in the community who do not attend school, but are of school age. This will lead to snowball sampling for the research

The following questions will guide the conversation.

1) Interview will begin with a discussion of the participants' history of video game usage (This elaborates on some of the questions of the survey).

2) What aspects of video games do you most enjoy?
    a. What keeps you playing video games?

b. What aspects of the games help you go forward in the game?
c. Give an example of your typical gaming session. Who is there? Where do you play?

3) How do you learn how to play a new video game?
    a. Give an example of the last new game you learned how to play
    b. Have you ever finished a video game and then replayed it? Why?
    c. What strategies do you use to finish a game or to complete a difficult part of it?

4) Do you think that video games teach you anything?
    a. What do they teach you?
    b. Do you think that they are hard work?

Snowball Sampling Question:

I) Do you know of any successful gamers in town who have dropped out of school?

Appendix F: Interdisciplinary Committee on Ethics in Human Research (ICEHR)

Letter of Approval

MEMORIAL UNIVERSITY

Interdisciplinary Committee on Ethics in Human Research (ICEHR)

Office of Research - IIC2010C
St. John's, NL Canada A1C 5S7
Tel: 709 864-2561 Fax: 709 864-4612
www.mun.ca/research

ICEHR Number:	**2010/11-170-ED**
Approval Period:	**July 19, 2011 – July 31, 2012**
Sponsor:	-
Responsible Faculty:	Dr. Dorothy Vaandering and Dr. Ursula Kelly Faculty of Education
Title of Project:	***Expert on drums, could be exporter: video games as a technology of learning for Inuit youth***

July 19, 2011

Mr. Jeremy Chippett
Faculty of Education
Memorial University of Newfoundland

Dear ~~Mr. Chippett~~ Jeremy,

Thank you for your email correspondence of July 19, 2011 addressing the issues raised by the Interdisciplinary Committee on Ethics in Human Research (ICEHR) concerning the above-named research project.

The ICEHR has re-examined the proposal with the clarification and revisions submitted and is satisfied that concerns raised by the Committee have been adequately addressed. In accordance with the *Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans (TCPS2)*, the project has been granted *full ethics clearance* for one year from the date of this letter.

If you intend to make changes during the course of the project which may give rise to ethical concerns, please forward a description of these changes to Mrs. Brenda Lye at blye@mun.ca for the Committee's consideration.

The TCPS requires that you submit an annual status report on your project to the ICEHR, should the research carry on beyond July 2012. Also to comply with the TCPS2, please notify us upon completion on your project.

We wish you success with your research.

Yours sincerely,

Lawrence F. Felt, Ph.D.
Chair, Interdisciplinary Committee on
Ethics in Human Research

LF/bl

copy: Supervisors – Dr. Dorothy Vaandering, Faculty of Education
Dr. Ursula Kelly, Faculty of Education
Associate Dean, Graduate Programmes, Faculty of Education

Appendix G: Nunavut Research Institute Scientific Research License

Nunavummi Qaujisaqtulirijikkut / Nunavut Research Institute
Box 1720, Iqaluit, NU X0A 0H0 phone:(867) 979-7279 fax: (867) 979-7109 e-mail:
mosha.cote@arcticcollege.ca

SCIENTIFIC RESEARCH LICENSE

LICENSE # 03 012 14R-M

ISSUED TO: Jeremy Chippett
Tusarvik School
PO Box 189
Repulse Bay, Nunavit
X0C 0H0 Canada

TEAM MEMBERS: J.Chippett,D.Vaandering,U.Kelly

AFFILIATION:

TITLE: "Expert on drums, could be experter": Video games as a technology of learning for Inuit youth

OBJECTIVES OF RESEARCH:
This research aims to investigate a successful learning activity among Inuit youth, video gaming, in order to determine how, what and why they learn from video gaming. This would represent a "strength-based" approach to learning putting the focus on the aptitudes the Inuit may possess as opposed to those EuroCanadian standards and testing skills determined to be missing.
The goal of this research can best be summarized in the following statement: To determine the features of Inuit culture that influence learning, to decode where Inuit learning occurs in digital video games, and to learn how to develop educational affinity that avoids negative influences, while capitalizing on positive features.

TERMS & CONDITIONS:

DATA COLLECTION IN NU:
DATES: October 01, 2013-December 31,2014
LOCATION: Repulse Bay

Scientific Research License 03 012 14R-M expires on December 31,2014
Issued at Iqaluit, NU on July 2,2014

for Mary Ellen Thomas
Science Advisor