

Running Head: IMPLEMENTING 21ST CENTURY PEDAGOGY

Implementing 21st Century Pedagogical Shifts:
A Study of Shifting Educational Practice and Its Impact on School Culture

by

Vicente Bustamante
Bachelor of Education, University of Alberta, 2008

A Project Submitted in Partial Fulfillment of the
Requirements for the Degree of

MASTER'S OF EDUCATION

In the Department of Curriculum and Instruction

© Vicente Bustamante, 2015
University of Victoria

All rights reserved. This project may not be reproduced in whole or in part, by photocopy or other means, without the permission of the author.

Abstract**Supervisory Committee**

Dr. Todd Milford, Department of Curriculum and Instruction
Supervisor

Dr. Christopher Filler, Department of Curriculum and Instruction
Departmental Member

This project will serve to underline specific shifts in pedagogy that the government of Alberta is mandating schools to adopt. It will use educational research to compare and contrast the value of shifting pedagogy in the classroom to cater to the new 21st century learner in the classroom. It will also use personal experiences in my professional context to lay out a pseudo plan of action for appropriate adoption of studied shifts in order to foster a supportive cultural community of both teachers and students. The goal of the project is to determine a proper course of implementation at the local level, with hopes to expand this application across my school district.

Table of Contents

| | |
|---|----|
| Abstract..... | ii |
| Acknowledgements..... | v |
| Dedication..... | vi |
| Chapter 1: Introduction | |
| Teaching Background | |
| My path to education..... | 1 |
| My career as an educator (so far)..... | 2 |
| Motivations for the project | |
| Academic and professional rationale..... | 4 |
| Personal rationale..... | 5 |
| Statement of Issue..... | 7 |
| Purpose of the Project..... | 8 |
| Chapter Summary..... | 8 |
| Chapter 2: Review of the Literature..... | |
| Defining 21 st Century Learning Practices..... | 11 |
| Principles of High School Redesign..... | 14 |
| Flexible learning environments and personalization..... | 14 |
| Personalization through student-centered learning..... | 17 |
| Mastery Learning as a pedagogical shift..... | 21 |
| School Culture Shifts..... | 25 |
| Concerns with culture change..... | 26 |
| Structuring a culture change for success..... | 28 |
| Why We Must Shift Our School System..... | 30 |
| Chapter Summary..... | 35 |
| Chapter 3: Implementing Pedagogical Change with Cultural Support | |
| Rationale for Implementation..... | 37 |
| Context and definition of the project..... | 38 |
| Project Overview..... | 41 |
| Flexible learning environments..... | 42 |
| Personal recommendations for implementation of flexible learning environments (FLEs)..... | 43 |
| Personalization through student-centered learning..... | 46 |
| Recommendations for implementing a personalized pedagogy at school..... | 48 |
| Assessment practices as a pedagogical shift (Mastery Learning)..... | 51 |
| Mastery learning as an assessment practice..... | 54 |
| The Mastery Learning Agreement..... | 56 |

| | |
|---|----|
| Chapter Summary..... | 57 |
| Chapter 4: Comprehensive Capstone Research Experience | |
| Introduction..... | 59 |
| Shifting Professional Thought..... | 59 |
| Shifting of Educational Practice..... | 62 |
| Experiences and Application of Project in the Future..... | 63 |
| Personal interactions and networking via the project..... | 63 |
| The impact of this program on my future career goals..... | 64 |
| Recommendations for Teachers Interested in 21 st Century Pedagogy..... | 67 |
| Conclusion..... | 68 |
| References..... | |
| Appendix A..... | 73 |
| Appendix B..... | 75 |

Acknowledgements

There is no doubt that a project of this magnitude could not have been done without the support of many people. I would like to take a brief moment to thank all of those who helped me along the journey.

A big thank you to all the professors from the University of Victoria who guided and instructed me through this program. I would like to express my specific gratitude to Dr. Todd Milford who went above and beyond as a professor and advisor to my project; without his advice this task would have been much greater. He truly is a great asset to the University of Victoria. Also a big thank you to all the great people in our cohort group; here's to lunches at Next Act and refreshments at O2s.

To my past teachers who inspired me to pursue a career in education, to my current colleagues who make my job the best it could possibly be – thank you. A special thank you to all of you who helped by reading my research and providing me with guidance along the way. To all my students, both past and present, thank you for truly being an inspiration, making me laugh, brightening my day and overall giving me a reason to become a better teacher.

Finally, special recognition has to go to my family and friends. Thank you very much for your unwavering support and encouragement. I could not have done it without you.

Dedication

I dedicate this project to my parents, Karen and Claudio. Thank you, Mom and Dad for teaching me the value of hard work and dedication. Thank you Dad for always encouraging me to be the best version of myself. Thank you Mom for teaching me that regardless of your experiences, you can always pursue your dreams. You both are truly an inspiration to me.

Chapter 1: Introduction

Teaching Background

My Path to Education. It can be fair to say that growing up I always juggled the idea of becoming a teacher, but it was not always an idea I was willing to pursue. High school was a time where I remember strongly considering (and subsequently suppressing) the idea of becoming a teacher. Part of the reason I wanted to become a teacher was due to my high school English teacher, Mr. Madsen. He had a way to make his classes the most interesting, even when the concepts were difficult to comprehend (e.g., Shakespeare). While I had teachers who challenged me to pursue greatness, I had others who seemed extremely disinterested in their job. Mr. Madsen challenged us to explore our creativity by modeling this creativity in his everyday teaching. He loved his job and this was reflected in us as students, it was truly inspiring. Sadly, in my high school career, I had more of the latter as teachers. This led me away from pursuing a teaching degree in college.

However, despite this reticence I also knew that I had many of the skills or abilities that would make for a good and effective teacher. For example, I knew I was good at working with people and was pretty good at talking to large groups of people, so I went into a Communications degree. I was very excited to be pursuing a degree that allowed me to interact with people on a daily basis. However, two years into this pursuit I had another individual who influenced my educational path. After a presentation my Communications professor and I were debriefing and I will never forget what she said: “that presentation was incredible, have you thought about teaching?” We discussed the idea of teaching being ‘natural’ to me and the impact of potentially changing degrees. As a result and apparent from my current situation, the following semester I changed majors and began to pursue a degree in secondary education.

Reflecting on this decision, it amazes me the impact that teachers and professors can have on the path of their students' lives. I am an example that it is not all teachers but in fact only a few that can impact. But this impact was in my case a highly influential one. This is one of the reasons I have never regretted making the decision to change majors and pursue a different career. My goal leaving university and starting my career was to become a teacher that impacts the students as much as some teachers have impacted me as a learner.

My career as an educator (so far). Over the past 6 years, I have experienced exponential growth as an educator. From international conferences, to district and government curricular training my professional development has shaped me into the educator I am today. I have been fortunate to work in distinctly different high schools in my district, which have impacted the way I teach as well.

The first 3.5 years of my career I was at an academic high school with strong emphasis on student achievement and traditional learning methods. It was at this school where I was challenged most significantly on my curricular knowledge and competencies in the classroom. The students, staff, administration and parents all had high expectations for the teachers at the school and student success on major summative assessments was the litmus for teacher competency. The expectations of teachers at the school taught me very quickly that I had to know my stuff; whatever I didn't know (curricular knowledge) I had to learn and report back to the students very quickly.

The tradeoff at this school was the fact that the students were so receptive to traditional methods, I became very good at lecturing. That is a good basic teaching skill that is tough to master. The constraints of teaching in such a traditional school setting were the limits to alternative methods of teaching that did not meet the traditional standards. The culture in the

school was so rooted in tradition that students rarely expressed any desire to expand their educational horizons beyond the idea of being spoon fed information and regurgitating it back on exams. The students I taught at this school had such high potential for achievement that teaching them in terms of classroom management was relatively simple. The students were brilliant and always very well behaved, but often did not push themselves academically which is something that 21st century pedagogy attempts to foster in the student. It was a shame that the culture at this school did not promote paradigm shifting pedagogy as these students would have excelled with 21st century learning.

The shift to my current school (2012 to present) has enabled me to grow in different ways as an educator. The culture of this school is much more progressive and open to the ideas of educational risks and rewards in pedagogical shifts. The administration is one that fosters the shifts of pedagogy to pursue more modern approaches to teaching and learning. For example in this environment, I have been able to pursue pedagogical growth that aligns more appropriately with the notions of 21st century education.

The school itself is a junior/senior high school that has a large focus on fine arts, as well as academics. The school population is reflective of a multicultural society with many ELL learners, as well as an International Baccalaureate program. To say the least, the school is very busy! More than my previous school, the school culture here fully supports shifts that align with the shifting needs of our students and many teachers are more comfortable adjusting their pedagogy to meet these needs. It is in this context that I have been able to explore pedagogical shifts and assess (subjectively) the impact of pedagogical shifts on the culture of the school.

Motivations for the Project

Academic and professional rationale. Part of the motivation for this project has to do with the shifts that have been implemented by our government. In May of 2013, the (then) Minister of Education, Jeff Johnson, and the government of Alberta passed the *Ministerial Order on Student Learning*. The emphasis of this order was to emphasize the necessary shift our education system must make teachers cater to the new 21st century student. According to the document, “the fundamental goal of education in Alberta is to inspire all students to achieve success and fulfillment, and reach their full potential by developing the competencies of Engaged Thinkers and Ethical Citizens with and Entrepreneurial Spirit, who contribute to a strong and prosperous economy and society” (Government of Alberta, 2013, p. 1). The document defines what it means to be a student with these types of competencies, yet does little to highlight the process of acquiring these skills. That job is up to the field of educators. In an effort to support the ministerial order, the Government of Alberta, along with Alberta Education, published *The High School Flexibility Enhancement Pilot Project: A Summary Report* (2013). This document was released in support of the *Inspiring Education: A Dialogue with Albertans* (2010) report.

Collectively, all of these reports are designed to rationalize and legitimize the shift of the educational system in Alberta. The *Inspiring Education* (2010) report opened up the educational exploration into the shifts that we as teachers must make in our pedagogy; the report was a summary of various town hall meetings, phone calls and other communications with the public of Alberta. In general, the report found that “Albertans see the role of the teacher changing from that of a knowledge authority to an architect of learning...the teacher should consider the interests, passions and natural curiosities of the learner. The teacher should inspire and motivate, while planting the seeds for lifelong learning” (Government of Alberta, 2010, p. 23). The tone of

the report published what many educators had been experiencing prior to the ministerial order - the push for educational reform in schools.

Due to the nature of my school, *The High School Flexibility Enhancement Pilot Project: A Summary Report* (HSFEPP) (2013) provides a subtle answer as to 'how' the change can be made in schools. In essence the project reports the findings of 13 schools who converted the messages of the *Inspiring Education* (2010) into action. A key element of the conversion was the removal of the 25 hour-per-credit requirement, meaning high school courses were no longer bound by time constraints and these schools could really transform their environments.

A common shift in practice this document identified was the pedagogical shift of flexible learning environments. This is referred to in the HSFEPP document as "Flex Time" (Fijal, 2013, p. 4). As noted by Fijal (2013), "flex time is time set aside for students to make decisions about what they will learn, with whom they will learn and where they will find support to learn" (p. 4). The main rationale behind this type of shift is to recognize that if learning is to take place, then students must take responsibility and ownership for this. While the teacher does not completely leave the learning decisions exclusively to the student, they do provide an opportunity for students to exercise choice and become advocates for their own learning. This theory will be tested and examined further in Chapter 3, as my school is in the process of this implementation.

Fijal's (2013) report also highlighted the importance of a school-wide culture shift to facilitate the implementation of flexible learning environments. The essential shift in culture is based upon the concept of "leadership that empowers teachers and students as decision makers" (Fijal, 2013, p. 5). The root theory behind this shift is to empower teachers and other educational stakeholders to make decisions that will impact various attributes of the school's educational practice. Essentially, this shift in school culture would require administrators to relinquish some

leadership to the teachers (much like teachers relinquishing choice to students, noted above). This shift is quintessential in fostering an environment where all stakeholders can ‘buy-in’ to the proposed educational changes outlined by the Government. By distributing choice and leadership throughout the staff, “it is the desire [for teachers] to create enhanced learning conditions that drives their practice” (Fijal, 2013, p. 5). This concept outlined by the report will also be explored further in Chapter 3 of this project.

Personal rationale. As noted in the introductory section of this chapter, much of the reason I am a teacher today is because of teachers who broke the traditional paradigm of instruction. While I am completely aware that an educational reform is not necessary for me to become this type of teacher, I am a firm believer in the fact that these shifts will benefit students across the province. This next section will highlight my beliefs that our education system is due for an inevitable change and also some of my work experience as motivation for this project. This will be highlighted in Chapter 2 by looking at Wismath’s (2013) work in combination with the seminal work of Noddings (2003, 2012) to determine an appropriate definition for 21st century learning.

Although I have only been a teacher for six years, I have already noticed significant changes in the way students acquire knowledge as well as the access to information available to them via technological changes. Since the beginning of the 21st century, the educational field has been exploring the idea of shifting to accommodate the ‘21st century student’. The issue is, however, that while our students and society has shifted dramatically, our schooling system has not. I believe that we have failed to maintain the same level of progress to properly serve our students in the classroom. The rationale from this perspective is to investigate and promote a reasonable (but long overdue) shift of our pedagogical approach to teaching modern day learners.

While it would be impossible to suggest sweeping educational reform in the context of this project, I do believe we must do more for our classrooms beyond loading them with the most modern technologies. Many school districts have allowed wide sweeping technological advancements in the classroom, yet the pedagogy remained traditional. The focus of educational modernization should incorporate technology with pedagogy. Our pedagogy and curricular focus requires modernization. The modernization requires a greater understanding of what type of pedagogical shifts will benefit the education system.

Another motivation for undertaking this project has to do with my recent leadership role in my school. I have accepted a position of TRANSFORM school coordinator, which is the liaison between my school and our district in terms of the shifts outlined in the ministerial order. It should be noted that TRANSFORM is the name of the initiative group created by my school district to assist with the implementation of 21st century skills and practices in the school. Essentially this role allows me to oversee the implementation of the *Inspiring Education* (2010) theory into practices at my school. This position lends itself perfectly to the project as I will have opportunity to investigate the impacts of implementation on my school (students and stakeholders alike).

Statement of Issue

When considering the implementations of 21st century practices in schools, there is an understandable reason why it has taken schools so long to accept these changes. A major issue when regarding the implementations is there is not enough evidence to support whether the changes improve student learning and achievement. Which leads many school districts to be cautious when they approach the idea of educational reform. The cycle then tends to repeat itself: we need changes but because there is not sufficient research done concerning said change no

district will want to implement the reform. The research this project will cover will attempt to bridge the disconnect between the need for reform and its impact on school culture. As noted previously, although our society has shifted drastically since the beginning of the 21st century there is still some resistance to implement change in the educational field.

Purpose of the Project

The overall purpose of this project is to provide academic rationale and plausible experiences to facilitate the implementation of 21st century practices in schools to match the needs of a shifting society. Specifically, this project will look at 21st century pedagogical shifts in the following categories: Flexible Learning Environments, Personalization and Mastery Learning. These shifts will be studied in relation to their overall influence on student learning and applicability to the modern classroom. Subsequently, the project will examine the impact the modernization of pedagogy will have on school cultures. Specifically this section will look at what a school specifically will need to do in order to facilitate the changes in their own environment. To do this, academic research will be considered in terms of distribution of leadership and the impacts of fundamental shifts on all educational stakeholders.

Overall, this project will collectively attempt to answer the main research question: How does the adoption of 21st century teaching practices in a local Grade 7 to 12 High School impact the perceptions of the school culture as seen through the eyes of the teaching staff and students?

Chapter Summary

This chapter has provided insight into my motivations and journey as a teacher so far in my career, as well as providing a rationale for the research project itself. As many other teachers can attest the reason I became a teacher was to inspire other students; much like I was inspired by my high school English teacher Mr. Madsen. Our education system has failed to keep up with

changes to appropriately teach the 21st century student. There is a definite need for a change in our approach to teach our students.

The Government of Alberta has written mandates to the education system that attempts to adopt 21st century practices in the classroom. They have done so with the publishing of both the *Inspiring Education* (2010) document and *The High School Flexibility Enhancement Pilot Project: A Summary Report* (2013). Both documents are quintessential in determining the government's theories of 21st century education. An issue that arises here is the lack of direction the government has applied to application of their theories.

Although the government has not provided appropriate direction into the process of implementation of their theories, it is the professional responsibility of teachers to undertake the task of implementing the shifts. Therefore, it is the focus of this project to evaluate academic research about 21st century education (in Chapter 2) and provide insight into the impacts of the shifts on school culture (which will be done in Chapter 3). After careful evaluation of academic research and a discussion of the impacts of the shift on school culture, it is my hope this project will provide reason to apply greatly needed changes in our classroom.

Chapter 2: Review of the Literature

The process of transforming education to meet the requirements of the 21st century is a process the government of Alberta and Alberta Education have attempted to foster most recently in all Alberta schools. With the publishing of *Inspiring Education: A Dialogue with Albertans* (2010) the government painted a clear picture of their expectations of what a learner will look like by the year 2030. The report notes that “*Inspiring Education* presents a vision for education to 2030. It sets a high-level direction, but it does not lay out the process for implementation” (Alberta Education, 2010, p. 5). Alberta schools are now being mandated to adopt policies and practices outlined in the *Inspiring Education* document with little support in the process of implementation. As teachers in the 21st century it will be our responsibility to determine the best possible practices to support the transition to a 21st century education system necessary to supplement the shifts undergone in other parts of society. This transition will have direct impact on students, teachers and overall school culture. In order for a successful transition, the whole school must accept a cultural paradigm shift.

It can be observed, just by looking around, that our world has undergone significant changes to all facets of life (social, economic, political and technological). While this may seem like a very obvious statement; it is equally obvious to state that our education system has failed in keeping up with these changes. This disconnect therefore, must be noted that our school systems are lacking in keeping up with the times meaning we are doing a disservice to our students (the young people to whom we are responsible for moulding and educating).

There is no doubt that schools everywhere are in the process of aligning aspects of their pedagogy to meet with these requirements. For example schools across Alberta participated in the *High School Flexibility Enhancement Pilot Project* (HSFEPP); a project in which 16 schools

explored the possibilities of flexible learning environments with the removal of the 25 hour per credit requirement (Fijal, 2013, p. 1). While this offers evidence that shifts are taking place sporadically in our society, there is a necessity for all schools to implement changes to their pedagogy. Yet, overall our education system has yet to implement sweeping educational reform.

So with these societal changes in mind as well as educators efforts to adapt to them, this project will examine the impacts of the implementation of 21st century teaching practices. Specifically, these will be highlighted to determine the specific impact they will have on school culture as seen from the students and teachers alike. The purpose of the project is essentially two-fold: to understand that the process of 21st century transition is inevitable for educational progress. Secondly, to identify the best 21st century practices outlined in academic thought to support this the culture shift in our schools. Educationally this type of shift seems to be inevitable and therefore should be explored in depth to determine the direct benefits of implementation.

In an effort to prepare the reader for the larger exploration in chapter 3, this chapter will focus on the academic research that has been conducted in the following areas: 21st Century Shifts in Education, School Culture Impacts and the Necessity for Implementation. Each section will contain a definition of the concept as well as comparative commentary from various academic journals regarding the necessity of 21st century education. The chapter will end with a general discussion of the academic support and will determine whether the shifts to a 21st century educational system are well worth it.

Defining 21st Century Learning Practices

While 21st Century learning practices have been discussed over and over in academic writing (Beetham & Sharpe,2013; Noddings,2013; Jackson & Davis,2000) there are still many

different interpretations of what they really are and how our schools are impacted by them.

Griffin, Care and McGraw (2012) examine the phenomena that schools naturally adapt to the skill demands of many jobs. Specifically they note that "historically, education has responded to and underpinned different forms of power in societies" (p. 2). Furthermore they acknowledge "policies of mass education have typically been adopted by countries as they industrialized" (Griffin et al., 2012, p. 4). What these authors note, is a natural response by education systems to respond to the economic and industrial needs of their nations.

Griffin et al. (2012) provided a clear direction for the necessity of schools to shift to provide the information necessary to maintain a populace that will contribute to the workforce of their country. According to these authors to define 21st century learning would have to be done so in accordance with the needs of the workforce. As noted "education faces a new challenge: to provide the populace with the information skills needed in an information society. Educational systems must adjust, emphasizing information and technological skills, rather than production-based ones" (Griffin et al., 2012, p. 2). They note the main reason schools shift their educational practices is as a service to the working industry, they note that with the rapid changes that occurred to the workforce (over the past 20 years) the education system is long overdue for a shift to meet our 21st century society. While this is a fundamental reason to create a change in schools, other academic writing has determined other equally valid definitions of 21st century teaching practices.

Wismath (2013) provides insights into the more common definition of 21st century learning shifts. In her article *Shifting the Teacher-Learner Paradigm: Teaching for the 21st Century*, Wismath (2013) notes an observation that the shift in education strays "away from the traditional lecture-by-expert model of instruction towards a 21st century pedagogy of

engagement and collaboration" (p. 88). Noddings (2012) echoes this notion by noting "education should be tailored as closely as possible to the interests and needs of individual children" (p. 28). Throughout her auto-ethnographic account of experiences as a teacher, Wismath (2013) examines the specific changes she experienced in adopting 21st century practices in her classroom. Over the course of her 'transformation' she notes the necessary change from leader in the classroom to more of a facilitator of knowledge. A major triumph occurred for her when she was teaching problem solving in her math class. Wismath (2013) noted that "some lively class discussions early in the course confirmed for me the importance of a highly student centric learning approach, based on principles of constructivist learning theory" (p.88) which is further supported by (Bruner, 1986;Clements & Battista, 1990).

Using Wismath's (2013) account is a testament to the definition of 21st century learning as a shift of pedagogy supports what most literature notes as the necessary changes that must occur in our schools. These concepts were echoed by Yonezawa, McClure and Jones (2012) in their work for the *Students at the Center* series. Wismath (2013) also provides concluding insight as to the experiences she faced in shifting her teaching practices. She notes her experience, "...challenged me [her] to change my [her] teaching style on a number of levels...to be a 21st century teacher, a role model and a guide rather than an expert, and to deal with and even enjoy the lack of control and structure which it entails" (Wismath, 2013, p. 89).

Wismath's (2013) auto-ethnographic account of her experiences provides a raw definition of 21st century learning as it pertains to teachers as practitioners. Combining Wismath's (2013) and Griffin et al. (2012) with references to seminal and influential works by Noddings, (2012) provides a basic definition of the 21st century shifts in education.

Principles of High School Redesign

As examined in the previous section, the basic principles behind 21st century shifts revolve around a shift to meet the needs of the 21st century learner. To meet these needs, the academics studied previously noted, the shift of the role of the teacher from leader to facilitator. The focus of this chapter will narrow to examine specific aspects of 21st century pedagogical shifts; as prescribed by the government of Alberta in the *Inspiring Education* (2010) document. As part of Alberta's *Foundational Principles of High School Redesign* (2011), the pillars that will be examined will be Flexible Learning Environments and Personalization and Mastery Learning. These pillars will be examined closely as they are the focus of the localized shifts that will be discussed in Chapter 3.

Flexible learning environments and personalization. As part of Alberta's *Foundational Principles for High School Redesign: Flexible Learning Environments* (2011); a “flexible learning environment expands beyond the classroom walls, allowing learning to take place in a variety of environments, including online. By offering choice through such environments, students determine what they learn, where they learn and when they learn” (Alberta Education, pg.1). Flexible learning environments are also conducive to student personalization. “Personalized instruction seeks to understand every student’s unique developmental level, learning style, passions, skills and foundational knowledge. It is based on ongoing differentiated assessment, and meaningful relationships between students and staff” (Alberta Education, 2011, p. 1). Using the foundational documents created by the government of Alberta, flexible learning environments and personalization will be examined academically.

In a Flexible Learning Environment, an emphasis is placed on learner choice and learner decision making when learning is learner-centred (Pataray-Ching & Kavanaugh-Anderson, 1999,

p. 60). Flexible learning environments also enable students to inquire into their learning, use their individual strengths, and address critical issues that arise in their individual learning process.

Hill's (2006) article analyses the variances in flexible learning environments in terms of their delivery and overall presentation; they can vary in location, time or even structure (i.e., online courses, student led classrooms etc.). Hill (2006) uncovered that the commonality between the different types of flexible learning environments was the benefit it had for individual student requirements. She notes the "hallmarks of flexibility in learning is the recognition of differences--differences in what we want to learn, when we need to learn it, where we need to access the resources that will enable us to learn, why we want to learn and how we like to learn" (p. 189). Although the attributes of flexible learning environments provided by Hill (2006) are genuinely robust, the reality of having flexibility in a school can provide a multitude of delivery methods according to each student's needs. Essentially as noted in the article, a student can have the choice of what, where, when and how learning occurs in the school (Hill, 2006). This notion of student choice is noted by Duffy, Lowyck and Jonassen (1993) as the principle belief of constructivist learning. According to Jonassen (1999), "constructivist conceptions of learning, on the other hand, assume that knowledge is individually constructed and socially co-constructed by learners based on their interpretations of experiences in the world" (p. 217). Therefore student-choice will contribute to overall learner satisfaction positively.

Hill (2006) builds on this notion by describing the specific aspects of flexibility the learner has control over in their learning. Hill's (2006) article highlights two distinct aspects of these types of learning environments, *flexible delivery* and *flexible learning* (p. 190). In the flexible delivery aspect of these types of environments, the teacher becomes more of a facilitator

of knowledge. The process is more linked with a guiding role and not a role of commanding the learning environment. The instructor would work with the learner collaboratively to assist with the discovery of key competencies (Hill, 2006, p. 190). This concept is explored in depth by van Merriënboer and Stoyanov (2008) in their research pertaining to student teacher collaborative settings. The article focuses on the need for “a shift away from the traditional instructional design paradigm” and focuses on the benefits of students and teachers working together to tackle educational concepts (van Merriënboer & Stoyanov, 2008, p. 70). Their focus was on the benefits of a system they call “shared responsibility models”, in this system there are partial controls from both the teacher and the student. The teacher in this model would select a potential list of tasks for the student to perform, with the student making a final decision of which to complete. When comparing this to a traditional learning environment (which they call a “system control”), they found “that learners in the shared-responsibility group report, as expected, a higher interest in the training and also tend to outperform learners in the system-controlled group” (van Merriënboer & Stoyanov, 2008, p. 78).

The concept outlined by van Merriënboer and Stoyanov (2008) is identified in Hill’s (2006) article as an important aspect of flexible learning, called learner negotiation. This is the case where the learner must be involved in the decision making process of the class. The teacher (as a facilitator) should allow for flexibility in these decisions, and the learner should become active in the decision making process. The reason for this, as highlighted in the article, is to meet individual learning needs as some students will be able to demonstrate knowledge retention using different learning methods. By doing this, both participants in this type of environment will take greater empowerment in the learning process (Hill, 2006). This notion of flexibility and involving the learner in decision making process was supported by Anton (1999). She noted that

“acting as a guide of procedures and activities during communicative activities, the teacher is responsible for establishing situations that are likely to promote communication” (p. 303). The article continues to discuss the notions that teachers feel like their absence as an educational leader in the classroom will be detrimental to student learning. It is identified however that teacher involvement as a guide (providing assistance) will enable students to perform at high achieving levels (Anton, 1999).

Personalization through student-centered learning. The concept of learner-centred or student-centred learning as detailed in the section above was explored and reinforced by Geven and Attard (2012). The main focus of this article was to argue the notion that student-centred learning should focus on generating freedom for students and teachers in the classroom (Geven & Attard, 2012, p. 154-155). Geven and Attard (2012) expand that the practice of student-centred learning must include an agreement by teachers to allow greater involvement with the students. Essentially, they are noting that teachers and students should work together to co-create courses and should collaborate to determine the look of lessons. Much of these same ideas were identified in Hill's (2006) article as well.

Among other characteristics of student-centred learning, Geven and Attard (2012) identify that a necessity for the implementation of this type of pedagogy is the notion of high student choice. "Student-centred learning is characterised by high student choice...at all times, student centred learning incorporates the idea that students have a choice about what to study, how to study, how to be assessed, etc. (Geven & Attard, 2012, p. 158-159). One of the main ways to increase student freedom in these types of learning environments would be to remove what Geven and Attard (2012) call "unfreedoms". These can be paralleled to educational 'red-tape'; uncontrollable aspects of school life that hinder both students and teachers. The most

prominent according to the authors, would be the idea of time. Time constraints and requirements for classes according to the Carnegie Model (i.e., 25 hour per high school credit requirement) tend to impede student-centred learning as the focus of lessons would revolve around the completion of a task against the clock rather than focusing on the involvement of the students as stakeholders. "The approach dictated by the 25 hour per credit requirement certainly put a very clear set of parameters around potential innovation and focused not so much on the learning needs of individual students, but primarily on curriculum content delivery" (Fijal, 2013, p. 3).

However, this approach disregards Piaget's theory of development and learning. Piaget's theory as examined by Furth and Wachs (1975) portrays the disregard for time as the foundation for learning in lieu of actual learner retention and scaffolding. They note that according to Piaget "learning can only take place on condition that the child has general mechanisms to which he can assimilate the information contained in learning" (Furth & Wachs, 1975, p. 12-13). The retention and actual acquisition of concepts has no relation to the amount of time spent learning, but rather the student's capacity for intelligent comprehension. This is what many academics call 'mastery' (which will be examined later in the chapter).

In another area of exploration, Larry Cuban's (2008) *The Perennial Reform: Fixing School Time* analyses the multitude of issues regarding changing the amount of time students should be in school in relation to educational reform. The idea of class time in schools, according to Cuban (2008), is directly impacted by industry. "Employers criticize the amount of time students spend in school because they wonder whether the limited days and hours spent in classes are sufficient to produce the skills that employees need to work in globally competitive economy" (Cuban, 2008, p. 241). Cuban (2008) explores the various applications of the

pressures to reform time in schools: adding more days to the school year, change to year round schools, adding instructional time to the schedule and extending the school day (p. 241).

However, the options discussed in the article generally revolve around recommendations from "policy makers" and do not take into account the teacher and student perspectives on the reforming of time in the school. Another major flaw of time-reform noted in the article was that there is no research that proves more time in schools positively impacts students' achievement. "The longitudinal and rigorous research on time in school was--and is--skimpy. The studies that exist are challenged repeatedly for being weakly designed" (Cuban, 2008, p. 244). Instead of highlighting the notion that more time is needed to ensure higher student achievement, Cuban (2008) examines the education of the student as the means for greatness. "What matters most to teachers are student responses to daily lessons...those personal connections become the compost of learning. Those connections account for former students pointing to particular teachers who made a difference in their lives" (Cuban, 2008, p. 248). What Cuban's (2008) article displays, in general, is that the focus on the classroom pedagogy, not time, is the contributor to high student achievement.

Student-centred learning and flexible learning environments as noted in the previous articles, all revolve around the notion that students should be the focal point of education. Ron Wolk's (2010) article "Education: The Case for Making It Personal" explores the necessity for our educational system to create more a more personalized education system for our students. Wolk (2010) notes that although there is much discourse revolving around changing our system, "even the most ardent reformers must admit that public schools and student learning have improved only slightly, if at all" (p. 16). Throughout the article, Wolk (2010) highlights certain reasons why the process of educational reform has been so slow, specifically the notion of

standardization resonated strongly as a negative contributing factor to this. Wolk (2010) describes standardization as "a framework of knowledge that experts deem to be essential for everyone, and they are worth little if we lack the processes and resources to achieve them" (p. 17). Holding all students to the same standards tends to work against our ideals of improving our public education system. Wolk (2010) argues that attempting to reform our school system using existing standards is useless if we continue to hold all students to the same standards. The article uses the metaphor of higher level math in high schools to illustrate the reality of our current system. "Advocates rationalize this requirement as a way of producing scientists and engineers to keep the United States competitive in the global market place. But that's like assuming that a couple of courses in high school art will produce artists" (Wolk, 2010, p. 18).

Using the metaphor as a means to illustrate the realities of our education system, Wolk (2010) emphasizes the necessity for our schools is not reform, but redesign (p. 18). According to the article, the most effective means of redesign in our schools would be to implement a pedagogy that supports personalization of student learning. "Personalization is key because it shapes virtually every aspect of a school" (Wolk, 2010, p. 18). The key features of personalization as outlined in the article all support the main theme of flexible learning environments in that "the student must come first and that every child deserves a personalized education" (Wolk, 2010, p. 18). Many elements of personalization in schools have been echoed by previously mentioned articles such as: teachers as facilitators (Anton 1999; Hill 2006), students play a role in designing curriculums (Duffy, Lowyck and Jonassen 1993; van Merriënboer & Stoyanov 2008), assessment based on accomplishment and not standardization (Wolk, 2010, p. 18-19). Wolk's (2010) article highlights these as contributing to a necessary shift our schools must attain. The article also highlights the fact that some schools have begun the

redesign process of personalization, noting that this shift is well within our educational reach (Wolk, 2010, p. 19). Personalization, student-centred education and the redesign of our pedagogy "are worthy objectives, essential to individual fulfillment and the welfare of the larger society" (Wolk, 2010, p. 21).

Mastery learning as a pedagogical shift. Mastery Learning is a pedagogical shift that has its roots in educational reform of assessment practices in the classroom. As one of the *Foundational Principles for High School Redesign* outlined by Alberta Education; "mastery learning is an instructional strategy that results in comprehensive grasp of curriculum as demonstrated through performance based assessment" (Alberta Education, 2011, p. 1). In this system, "students receive feedback not only about what they know well but also about what they need to revisit in order to demonstrate mastery" (Alberta Education, 2011, p. 1).

The push to shift assessment and pedagogical practices as outlined by Alberta Education also has roots in academia. Neill's (1997) article *Transforming Student Assessment* supports the drive to redesign the way we assess students in our classroom. The general sentiment of the article is "a deep desire for a radical reconstruction of assessment practices, with student learning made central to assessment reform" (Neill, 1997, p. 35). The reform discussed in Neill's (1997) paper indicates a necessary shift to a system of assessment that improves student learning through the use of formative assessment and the proof of student mastery. What is most notable in the article is the notion that students should have multiple ways to demonstrate understanding with curricular integration. "Assessment to enhance student learning must be integrated with, not separate from, curriculum and instruction" (Neill, 1997, p. 35). This is not unlike backwards design in assessment, as noted by Drake and Reid (2010). In this system, the teacher starts a unit plan by "exploring expectations to determine what is most important to know, do and be, and

focus on how to assess student outcomes. Designing appropriate instructional activities is the last step" (Drake & Reid, 2010, p. 2). The units are created using a concept-based approach, and teachers assess using a rich assessment task that has been preceded by formative assessments to prepare the students for the task.

Highlights of Neill's (1997) recommendations for student assessment revolve around a high need for student and teacher collaboration. "Teachers must keep track of student learning, check up on what students have learned, and find out what's going on with them" (Neill, 1997, p. 35). Although it may appear that teachers have more responsibility and work because of this assessment model, the main goal of this type of model is to foster an environment where the student becomes more of an independent advocate for their education. "Students learn to reflect on and evaluate their own work. After all, an important goal of school is for students to be able to learn without relying on teachers" (Neill, 1997, p. 35). Thus the role of the teacher in this model, according to Neill (1997), shifts from leader of classroom to a facilitator of learning, which has been previously valued in the works of Hill (2006), Anton (1999) and Wolk (2010). The purpose of assessment "is a continuing flow in which the teacher (in collaboration with the student) uses information to guide the next steps in learning" (Neill, 1997, p. 35).

The idea of quality formative assessment is supported by Black and Wiliam's (1998) *Inside the Black Box: Raising Standards Through Classroom Assessment*. Black and Wiliam (1998) note that teachers have an extremely difficult task of fully monitoring a classroom of students with different needs and while being expected to ensure success for all of them. The recommendation by the authors is to tackle the task more effectively (Black & Wiliam, 1998, p. 140). Black and Wiliam (1998) acknowledge that applying formative assessment practices with a mastery focus tends to raise standards. Many of the notions discussed in the article tend to

support elements of 21st century teaching practices already discussed. For example, a resonating idea proposed in Black and Wiliam's (1998) article is that "teaching and learning must be interactive. Teachers need to know about their pupils' progress and difficulties with learning so that they can adapt their own work to meet pupils' needs" (p. 140). The personalization of teacher-student relationships in the classroom, as noted by Black and Wiliam (1998), will lead to greater student achievement especially when the formative assessment is used to adapt to the students' needs (p. 140).

Black and Wiliam's (1998) article highlights the reasoning to support how formative assessment can lead to greater student achievement. The article highlights a research review conducted by Fuchs and Fuchs (1986) which supports the implementation of formative assessment. "These studies show that innovations that include strengthening the practice of formative assessment produce significant and often substantial learning gains" (Black & Williams, 1998, p. 140). In order for these results to be applied practically, the article mentions many strategies that should be adopted in the classroom. Black and Wiliam (1998) note that formative assessment must be frequent and timely, teachers must apply significant changes to their pedagogy, formative results must be used to adjust teaching and learning and teachers must overemphasize advice given and underemphasize the giving of marks and grades (p. 142). This is directly supported by Kumar (2013) who notes that "formative assessment is thus a pedagogic tool which is used collaboratively by both teachers and learners to enhance learning, adjust teaching and learning activities, provide feedback on the efficiency of teaching and learning and direct a future path" (p. 753).

Although many of the strategies mentioned in this article require a shift of culture in the classroom (which will be explored in the next section of the chapter), Black and Wiliam (1998)

provide appropriate reasoning for the implementation of these strategies. An important aspect of proper formative education involves the justification of formative tasks and the ability for the student to amend tasks. "Tasks have to be justified in terms of the learning aims that they serve, and they can work well only if opportunities for pupils to communicate their evolving understanding are built into the planning" (Black & Wiliam, 1998, p. 143). Schafer and Moody (2004) agree that activities should be created that provide students with opportunities to demonstrate their understanding and should also provide teachers with a rich diagnostic to help them understand the process each student must go through in attaining mastery.

Another important element of formative assessment with a mastery learning focus is the provision of appropriate feedback by the teacher. "Feedback has been shown to improve learning when it gives each pupil specific guidance on strengths and weaknesses, preferably without any overall marks" (Black & Wiliam, 1998, p. 144). The feedback provided must give the student a clear path to mastery in to allow the pupil the opportunity to review and make appropriate adjustments to their accumulation of knowledge.

Griffin, Care and McGaw's (2012) views on formative assessment and mastery learning greatly support the implementation of this as a pedagogical practice in classrooms. Their article refers to this type of model as a "developmental model for learning". Essentially, "developmental models build on and scaffold existing knowledge bases of each student and help the student to progress to higher order and deeper levels of learning" (Griffin et al., 2012, p. 8-9). Much like the other articles examined on this topic, Griffin et al. (2012) emphasize the necessity for teachers to involve students in the process and to ensure that all teaching is student-centred and student focused. "In applying these formative assessment practices, teachers also develop skills in using assessment data to adapt their own practices in order to meet student's learning needs"

(Griffin et al, 2012, p. 12). As noted in the article as well, for this type of model to work the learning environment (as well as the pedagogy) must be manipulated to meet the needs of the individual student.

So far in this chapter we have examined the academic support for specific elements of 21st century pedagogy pertaining to Flexible Learning Environments, Personalization and Mastery Learning. In order for the implementation to be successful, there needs to be an overall school culture change and adoption of these principles by all stakeholders. The following section of the chapter will focus on the process of facilitating successful school culture change.

School Culture Shifts

The implementation of 21st century educational practices (as noted previously in the chapter) in schools requires a school culture that supports and facilitates this change. The following section will examine educational discourse about school culture change and the impacts it will have on teachers and students.

Hammond's (1997) article "What Matters Most: Teaching for America's Future" examines the necessary requirements schools need to employ for successful 21st century school changes. Hammond (1997) notes that "part of building a professional culture is redesigning aspects of schooling...still organized around old concepts of learning" (p. 2). According to the article, teachers must be re-educated to understand the 21st century learning process to provide a deeper understanding of learning and pedagogy in the 21st century (Hammond, 1997, p. 2). This type of professional development should be included in daily activities and done through professional communities; they should also include all types of teachers young and veteran alike (Pg. 2).

Hammond (1997) identifies the main proponent of school culture change is the teacher, as long as that teacher is on board with the shifts. The recommendation to get teachers to become proponents of change, is through proper professional development. This type of professional development should: engage teachers both as teachers and learners, be grounded in participant-driven inquiry, be collaborative and involve a sharing of knowledge among educators and a focus on communities of practice, not on individual teachers (Hammond, 1997, p. 4). Hunzicker (2010) notes that “when professional development is supportive, job-embedded, instructionally focused, collaborative and ongoing, teachers are more likely to consider it relevant and authentic, which is more likely to result in teacher learning and improved teaching practice” (p. 178). With these principles of professional development in mind, Hammond (1997) reiterates the emphasis on teacher collegiality and collaboration noting the importance of this type of development as a social activity. "If such standards are used to guide teachers' professional development, a culture of professional sharing and reflection would emerge" (Hammond, 1997, p. 5). The last principle of school change provided by Hammond (1997) discusses the importance of investing in teacher education and support for lead teachers. "Supporting the courageous educators who are leading our schools into a new era of renewal is at the heart of reform" (p. 7).

Concerns with culture change. When the discussion of educational reform and redesign surrounds a school community, there are many causes for concern. Grant and Hill (2006) identify many concerns teachers have in relation to the adoption of 21st century practices in schools, much of the concern is related to the lack of input teachers have in culture change.

"Powerlessness to implement pedagogy that extends beyond mandated curriculum standards and a lack of autonomy could contribute as stressors for teachers, impacting teachers' self-efficacies"

(Grant & Hill, 2006, p. 20). Sentiments like this are present in schools that view the potential change as a threat, and as policy that is directed in a top-down fashion.

Grant and Hill (2006) break down the factors that influenced the teachers' decisions to use 21st century practices in their classroom. Each concern is followed by a short description, which will be described in brief. The list of concerns are: recognition and acceptance of new roles and responsibilities, comfort level, tolerance for ambiguity and flexibility in management, confidence in integrating technology and integration of the new pedagogy with realities beyond the classroom (Grant & Hill, 2006, p. 21-22). The general concerns expressed in the recognitions and acceptance factor highlights the abilities of teachers to recognize their shift in function in the classroom. Many teachers may not accept the new role, leading to a failure of adoption. In terms of comfort level, this factor relates to "the level to which the teacher is comfortable with a more dynamic environment" (Grant & Hill, 2006, p. 21-22). If the teacher is generally uncomfortable with the new learning environment then the shift in school culture could not occur. Wiley (2000) as well as Gold and Roth (1993) identify the potential for these concerns to contribute to teacher stress levels.

In terms of the tolerance for ambiguity and flexibility, management relates to the "psychological and social facets of integrating student centred pedagogy" (p. 4). The fourth factor is in relation to the confidence of integrating technology into the learning environment. The shift in culture to a school that adopts 21st century pedagogy will require the use of technology; blending technology into a lesson can lead to stressful situations for some teachers. If they refuse to incorporate technology or find difficulty in doing so, the change in culture could be challenged. Finally the integration of new pedagogy "situates the teachers' experiences of the student-centred pedagogy within a larger context, reflecting the broader educational culture's

emphasis on appropriate pedagogy, assessment and student activities" (Grant & Hill, 2006, p. 22). This factor could impede the culture shift if teachers lack the confidence to approach the shift as a new culture change. Rovegno (1994) notes that there must be a shift in the teacher's understanding of the overarching culture change and this must be facilitated and communicated between staff for the appropriate culture shift to take place.

Grant and Hill (2006) examine the factors which may contribute to teacher recoil from student-centred educational shifts. "However, the potential benefits to students are significant, including: learning to learn, metacognitive strategies promoting self-directed and self-regulated learning...in addition to academic achievement with fundamental curricular content" (p. 27). It has been examined that while adopting a fundamental paradigm shift in educational pedagogy is daunting, there are many positive elements for our students. It is with this in mind that the next section of the chapter will focus on what schools need to do to appropriately prepare teachers for a school culture change.

Structuring a culture change for success. Nel Noddings (1995) provides a strong view of positive culture change in her article "A Morally Defensible Mission for Schools in the 21st Century". The article in general calls for a massive overhaul of school culture to reorganize subject matter into theme based courses, rather than traditional disciplines (Noddings, 1995, p. 365). The main argument provided by Noddings (1995) is "against an ideology of control that forces all students to study a particular, narrowly prescribed curriculum devoid of content they truly care about" (p. 366). The shift promoted by Noddings (1995) also condemns the current assessment practices in schools, as they do not represent an actual intellectual agenda, essentially noting they do not accurately reflect the students' achievement (p. 367).

Noddings (1995) explores the transformations that should take place to ensure a successful culture change in the latter stages of the article. She notes "a transformation...requires organizational and structural changes to support the changes in the curriculum and instruction. It requires a move away from the ideology of control, from the mistaken notion that iron handed accountability will ensure the outcomes we identify as desirable" (Noddings, 1997, p. 368). The argument against the traditional structure of schools is substantial, according to the article, as our society has shifted since the creation of schools (while it is mentioned throughout the article that our schools have only changed very slightly). "We need to give up the notion of a single ideal of the educated person and replace it with a multiplicity of models designed to accommodate the multiple capacities and interests of students" (Noddings, 1995, p. 368). The capacity of support required for the change noted by Noddings (1995) would be astronomical, but necessary to ensure that our education system addresses important issues in the 21st century.

Johnson and Templeton (2011) highlight the necessary skills teachers need in order to be prepared for culture change in their schools. *Preparing Teachers for the 21st Century: A Renaissance* focuses on specific aspects of professional development teachers need to receive to be educators in the 21st century. "The best professional learning experiences help aspiring leaders integrate skills, knowledge and personal meaning as they perform" (Johnson & Templeton, 2011, p. 121). Johnson and Templeton (2012) highlight the specific areas of professional development teachers should seek for 21st century learners. These are: human development knowledge, content and pedagogical knowledge and knowledge, and skills and dispositions.

Human development knowledge is seen as vital "to be able to know what, when, and how to effectively teach appropriate concepts and skills throughout the learning process, thereby

supporting healthy development and successful learning" (Johnson & Templeton, 2012, p. 122). It is vital for teachers, rookie and veteran alike, to develop a modern understanding of the 21st century student in order to facilitate their teaching practices. Content and pedagogical knowledge refers to the process of 'how' to teach the subject matter. "Twenty-first century teachers must have knowledge that encompasses language, culture, technology, the brain, statistics, human behaviour, and social skills to name a few" (Johnson & Templeton, 2012, p. 122). This type of knowledge is imperative for teachers to practice a constructivist type of instruction model, vital to a 21st century classroom as highlighted by Clements and Batista (1990). "Constructivist teachers must be able to pose tasks that bring about appropriate conceptual reorganizations in students. This approach requires knowledge of both the normal developmental sequence...and the current individual structures of students in the class" (Clements & Batista, 1990, p. 35). The last area of professional development highlighted by Johnson and Templeton (2012) is based on teachers strengthening knowledge, skills and dispositions. "Improving and strengthening the knowledge, skills and dispositions of 21st century teachers will require broader and more comprehensive collaborative partnerships between universities, schools, parents and communities" (p. 123). The purpose of this aspect of teacher professional development is based around the notion that collaboration will keep the practice accountable as well as work to improve practices of all stakeholder with the overall benefit being the students. By implementing these and other strategies mentioned above, the culture shift of schools towards a 21st century environment, will be seamless.

Why We Must Shift Our School System

Whether it be from the government or academia, there is a constant need to shift our educational practices to align with the 21st century and the changing needs of our students. This

chapter has presented academic support for 21st century pedagogical shifts as well as support for the potential to align a school culture to meet these shifts. The attention of this chapter will now be focused on the necessity of implementation and educational culture change. The literature examined in this section will serve to justify and even recommend a necessary shift of our education system, for the betterment of our students.

Wolk's (2007) article, "Why go to School?" critically examines the current education system and provides reasonable justification for changes. The first section of the article examines significant issues with our education system and the emphasis it places on what Wolk calls "fill in the blank schooling" (p. 649). He notes "we are living in a schooling delusion. Do we really believe that our schools inspire children to live a life of thoughtfulness, imagination and social responsibility?" (Wolk, 2007, p. 649). The criticism in the article resides with the notion that schools severely overemphasize reliance on textbooks, lectures, and standardization. Wolk (2007) explores the negative consequences of a schooling system based around these ideals as they impact our students. "Far more than reading to learn, our children are learning to hate reading. More than learning any of the content, they learn to hate learning" (Wolk, 2007, p. 649). What Wolk (2007) is describing here was highlighted by Goodlad (1984). He noted that schools in general were not places of creativity, exploration and learning but rather a building that incited boredom and no emotional attachment to learning. According to Wolk (2007), if the schools maintain this type of learning emphasis the results could become disastrous for our future society. In relation to student learning, Wolk (2007) notes that when students "are devoid of opportunities to create original thought--we should expect the obvious outcome: children--and later adults--who are unable to think for themselves...passive schooling, creates passive people"

(p. 649-650). The cautions and criticism of the current state of our schools are rooted in a realistic tone of a want to change.

The concept of 'Why go to school?' as proposed by Wolk (2007) is definitely a question that has been debated over time. Wolk (2007) notes that our system is at a crossroads, and that our education system must take quick action for change. "Either we remake our schools into vibrant workshops for personal, social and global transformation, or we must own up to our complicity in perpetuating a superficial, unthinking, and unjust world" (Wolk, 2007, p. 650). The discourse continues to note that it is the responsibility of current educational practitioners to take responsibility for the future and create an environment of change, in relation to the 21st century learner. Wolk (2007) describes what types of changes schools should adopt in their shifts, most notably "A love for learning" and "social responsibility" (p. 652; 654).

It is important for schools to inspire a love for learning and wonder, something that has been lost in our current educational system (Wolk, 2007). "Children should have regular opportunities across the curriculum to initiate learning, explore their own questions, and learn about their own interests" (Wolk, 2007, p. 652). Using a social studies classroom, Engle (1960) explored the concept of using the classroom for students to initiate their own conversations about democracy. He noted that students would be better prepared to participate in society versus learning via rote memorization and textbooks. Wolk (2007) notes the importance of this lies in the principle that students' knowledge and curiosity will be honoured, and a culture of a love of learning will be fostered. In relation to fostering this love for learning in students, Wolk (2007) describes the importance of teaching social responsibility. "Teaching social responsibility is about providing children with the skills, knowledge, and dispositions to critique today's society and to work for a better world" (Wolk, 2007, p. 654). The article continues to highlight reasoning

why our schools should make this shift, the common theme highlighted revolves around fostering a greater educational experience for our students. "We must stop schooling our children as if they were products and reclaim our schools as sacred places for human beings...as professional educators it is our responsibility to challenge curricula and to create schools that are personally and socially transformative" (Wolk, 2007, p. 658).

Gosper and Ifenthaler (2014) provide an appropriate, if differing, viewpoint in regards to the reasons a shift in education is necessary, noting "the introduction of more resources and flexibility into a traditional teaching/lecture model was not sufficient to engage students" (p. 4). The article focuses on a shift of education to highlight lifelong learning, acting for the social good and a focus on employability (Gosper & Ifenthaler, 2014). Their article also provides a reference to the *UNESCO Declaration on Higher Education for the Twenty-First Century*, which highlights the following role of educational institutions:

"[E]nhance their capacity to live with uncertainty, to change and bring about change, and to address social needs and to promote solidarity and equity...and place students at the centre of their concerns, within a lifelong perspective, so as to allow their full integration into the global knowledge society of the coming century" (UNESCO, 1998, para. 14).

Gosper and Ifenthaler (2014) note that the push for education system reform expands beyond local academic institutions to include recommendations for reform by the United Nations.

Eric Toshalis and Michael J. Nakkula (2012) focus on student motivation as support for an educational shift in our schools. The article presented highlights the benefits of a student-centred shift of instruction in supporting students and encouraging their academic achievement. "A more student-centred approach would be to ascertain what motivates individual students to

achieve in a particular class and then enlist the students' help in identifying other factors that might elevate their motivation, factors that may include changes to the context or changes in the individuals beliefs and behaviours" (Toshalis & Nakkula, 2012, p. 5). The article explores the dynamic of student-led instruction and the positive impact on individual motivation. Many valuable findings are promoted throughout; a resonating theme is a classroom that focuses on the students before the curriculum. "Student-centred classrooms that capitalize on the power of self-determination can substantially enhance achievement motivation" (Toshalis & Nakkula, 2012, p. 10). Toshalis and Nakkula (2012) recommend this style of education in our schools as a means to foster improvement in student motivation and achievement in our students. "In this era of standardization...the practice of elevating student voice might seem countercultural but given the importance of agency, autonomy and self-regulation in student learning, it is really rather commonsensical" (Toshalis & Nakkula, 2012, p. 23). The focus of the article is to give the student a voice in their education, and to break the traditional view of pedagogy currently being practiced in many schools.

In the article "Twenty-First Century Students Need 21st Century Skills", Kay and Greenhill call for a massive overhaul of the educational system to meet the needs of our 21st century society. "Every single aspect of our education system--standards, assessments, professional development, curriculum and instruction, and learning environments--must be aligned to prepare citizens with the 21st century skills needed to succeed in work and life" (Kay & Greenhill, 2011, p. 42). The focus of this article revolves around education for the worker of the future, realistically looking at the employability of the student and analyzing whether our system currently functions to adequately prepare them. "To be 'educated' today requires mastery of core subjects, 21st century themes, and 21st century skills. To help students achieve

proficiency in 21st century skills, teachers and administrators need education support systems that strengthen their instructional, leadership and management capacity" (Kay & Greenhill, 2011, p. 47). According to Kay and Greenhill (2011) our educational system requires a complete change in order to be successful. While the pedagogy is instilled in a classroom, the teacher will require support from all facets of the educational field in order for students to adopt 21st century outcomes.

Kay and Greenhill (2011) also discuss the types of content and curricula that should be covered in a 21st century classroom. They note that although the mastery of core subjects is paramount, there must be a shift beyond basic skill retention in schools. "Schools must move beyond a focus on basic competency in core subjects to promoting understanding of academic content at much higher levels by weaving 21st century interdisciplinary themes into core subjects" (Kay & Greenhill, 2011, p. 48). The article also focuses significantly on a shift away from traditional assessment practices, towards a focus of assessing 21st century skills as well. "We must move from primarily measuring discrete knowledge to measuring students' ability to think critically, examine problems, gather information, and make informed, reasoned decisions while using technology" (Kay & Greenhill, 2011, p. 57). The approach to assessment is highlighted in the article as necessary for the advancement of 21st century skills, to ensure our students are adequately prepared for the future.

Chapter Summary

The topic of 21st century educational shifts has been popularized in academic research and journals for the past 20 years. The purpose of this chapter was to examine literature on the topics of: (a) 21st century learning practices with emphasis on flexible learning environments and formative mastery assessment, (b) the implications of a school culture shift, and (c) the

necessity of implementation of these practices for the benefit of the students. The literature was comparatively examined using articles from various sources and authors with the intention to academically support the concept that schools should adopt 21st century practices for the benefit of the student population.

Chapter 3: Implementing pedagogical change with cultural support

Rationale for Implementation

As noted in the previous chapters, Alberta Education, along with the education minister, mandated a modernization of pedagogy for our schools. This was rationalized in various government documents, but most notably *Inspiring Education: A Dialogue with Albertans* (2010) as well as the *Foundational Principles of High School Redesign* (2011) documents. The fundamental goal of these publications were to define what the ‘ideal’ learner should look like in the year 2030. The description of this learner required skills that were going to be acquired in a redesigned school system. The pedagogical paradigm shift recommended by the government was based upon 21st century educational practices.

Prior to exploring the project a brief aside that offers a personal rationale for the implementation of the project (identified in the next few paragraphs) is based upon my experiences with great educators. Growing up, I was impacted greatly by teachers who went out of their way to teach in a very non-traditional manner. They were the educators who broke the mold to inspire creativity in their students; in my case classes did not feel like learning. With these special teachers, school was a great experience. These experiences as a student made me want to be a teacher who did the same for their students. I feel that through the proper implementation of the project via the parameters of 21st century learning, many teachers could become as inspiring as these teachers and break the traditional view of education.

The big picture approach that this project will attempt to tackle is based upon the notion that teachers across the educational field should be shifting their pedagogy to match not only

government recommendations, but also their students. The outline of this project will serve to connect academic and government documentation with personal recommendations of how to shift pedagogy. The approach will be to take academic references (from Chapter 2) and provide contextual information from the current practices at my school. Once these have been compared and contrasted, the element of this chapter that will serve the greatest purpose will be the suggestions of change that I will provide. These will serve to inform other teachers of the need to shift pedagogy at the benefit of the student body with the intention that teachers across my school district will also attempt to align their practices with the intentions of 21st century pedagogy.

Academia has also provided rationale for the necessity to shift pedagogy to align with 21st century practices. When considering the seminal work of Noddings and Piaget, examined through Furth (1975), it is clear they laid the foundational work for educating the whole child. Many other academics have written on this type of pedagogy and when considering the tone of the research, many agree a shift is absolutely paramount to match the growing needs of our students. The literature proves that although classrooms have remained relatively unchanged in recent years, there has been a dramatic change in the way our students learn (Furth & Wachs, 1975). To ignore the need for change is an option that cannot be explored in education today.

Context and definition of the project. The purpose of this project, in essence, is to create an exemplary model for the adoption of 21st century pedagogical shifts in a high school setting. The procedure for the project will be to highlight the current situation my school is in and to contrast that with academic research to create simple solutions to improve the efficiency of our pedagogical shift. This chapter will be expressed using a narrative as well as critical thinking method of research.

This will be done in a localized context, looking at 21st century shifts through the pillars outlined in the *Foundational Principles of High School Redesign* (2011) document. Although the document contains nine ‘pillars’ of redesign, for the purpose of the project there will be a focus on “Flexible Learning Environments,” “Personalization,” and “Mastery Learning.” These are the shifts that my school has decided to focus on for our redesign processes.

The project is very personalized to fit the specific shifts that my school will be adopting. The school, Louis St. Laurent High School, is a Junior/Senior High School with a population of just over 1000 students. The school’s demographic is a range of middle class students, where some come from very wealthy families and some students need assistance from social programs. The school also has a large population of English Language Learner (ELL) students, many of whom are newly immigrated to Canada. The staff itself is a mix of teachers with a majority of them being younger (i.e., less than 40 years old).

My role in this project will be to create a template for a dialogue between all stakeholders to ensure the implementation process of our ‘redesign process’ is as smooth as possible. My role in the project coincides with a position that I am currently involved with in my school district. I am the TRANSFORM school liaison between the district and my school. TRANSFORM is Edmonton Catholic Schools’ branch that researches and implements various projects and professional development (PD) sessions specifically aligned with the intended shifts of 21st century education recommended by the Government of Alberta. My role in this process is to act as a facilitator between the two locations and gather information that could be useful for TRANSFORM in our district. Through the creation of this project, I am hoping in the future these suggestions could be brought to TRANSFORM to facilitate the implementation in future schools.

As noted previously, the focus of this project will be to create a plan to assist my school in the implementation of the three pillars (Flexible Learning Environments, Personalization and Mastery Learning) from the *Foundational Principles of High School Redesign* (2011) document. One of the reasons the project will focus on these three pillars specifically, is because they have been suggested by the administration after dialogue with the teachers. A complete shift of all principles would be an extremely difficult task, so the decision was made to accomplish a shift of pedagogy in the areas that align mostly with our school goals. It will be my task in this project to determine an appropriate course of action that could be taken to ensure a smooth transition and adoption of 21st century practices.

While there are many teachers who look at educational reform and question the validity of these shifts, there are multiple important reasons why I have chosen to explore this concept for my project. The main reason is that the implementation of the shifts are inevitable. Because *Inspiring Education* (2010) is a government-created document, eventually all schools in Alberta will be forced to implement pedagogy that aligns with this document. Logically, it makes sense for proper research to be done in relation to the appropriate methodology needed for proper adoption of this process. My school administration is an early adopter of the messages outlined by the government of Alberta, and therefore as one of the lead teachers for 21st century pedagogical shifts in my school I feel like a proper plan of action is necessary for this to be successful. A second, equally important, purpose for this project is the notion that education is long overdue for pedagogical reform. If societal shifts are aligned with educational shifts, it is clear the latter is severely behind in modernization. In essence, many classroom activities and instruction have remained unchanged for nearly a century. Eventually our schools will be forced

to change to meet the needs of the ever-evolving student population and societal expectations; it seems like opportune timing to begin the culture of change in our schools.

When speaking of change and culture, it should be noted that throughout the implementation of these shifts (and over the course of the project as well) there must be a sensitivity towards school culture. By school culture I am referring to the fact that in order for the project to be successful students, teachers and all stakeholders must have input into the process. For example, it is important to look at the demographics of the students and staff at the school because they directly influence the success or failure of these pedagogical shifts in my school. In doing so, each group will feel responsibility for these shifts and will invest effort into maintaining with the process. This project will be especially sensitive to the impact these changes will have on school culture to ensure that all members of the school community feel value in the change.

The following section will explain the overview of my project with reference to research conducted in chapter 2. As stated, the overall purpose of the project is to provide insight as to how a school could shift their pedagogical approach to align with the principles of 21st century learning. This will be done while maintaining a careful observation on potential impacts on school culture.

Project Overview

The following section will focus on the categories of *Flexible Learning Environments*, *Personalization* and *Mastery Learning*. The focus of each category will be carefully examining the current practices in my school and offering my personal recommendations to assist in a more functional shift of school culture to model 21st century learning practices. Each recommendation will be supported by academic reference and personal reflection. Overall, the intention of the

project is to use my localized school to create a pseudo plan of action that other schools can use in consultation for their shifts. The manifestation of the project will be a TEDx type of talk that could be delivered to any school going through these changes.

Flexible learning environments. The practice of Flexible Learning Environments (FLEs) in my school has taken on a few fundamental shapes. The main shift that has been implemented in my school has been the implementation of ‘Flex Blocks’. Our Flex Block system occurs four times a week for one hour over the lunch period (11:15 to 12:15). The creation of this time period occurred by removing eight minutes from each period during the day (4 blocks) and adding that time to the existing lunch period. The expectation for our students is for them to eat lunch while attending a flex block of their choice. The caveat is that students are not mandated to attend flex; the defense of this is because students should not be forced to be flexible. The expectation for teachers is to offer two half hour flex blocks a week, which are based on a schedule created and posted for the students to consult. For example, in my department (Social Studies) each teacher should be offering a flex block on Mondays and Wednesdays. The flex block offering should be based on the curriculum they teach and align with curricular objectives. The manifestation of this type of schedule and offering was created based on dialogue with schools involved in Fijal’s (2013) *High school flexibility enhancement pilot project: A summary report*.

The complication of a flexible timetable is that it needs to be suitable for a majority of the staff (in terms of scheduling) but having a Flex Block over lunch has not been overly practical. As noted in Chapter 2, Fijal’s (2013) report only recommended that high schools were no longer required to grant credits based on the Carnegie requirement. There was no mention of what the timetable should look like, and because of this, flexible timetables appear different across

Alberta. The reality for the sake of Flexible Learning Environments does not necessarily have to revolve around the notion of time, but a more appropriate way to use these blocks for the benefit of the student. This would be a reflection of pedagogy and not minutes in the timetable.

While many teachers at my school agree the notion of a flex block is extremely beneficial, there are some considerations that must be placed for improvement. The current model of flex block appears to be very remedial based. Many teachers use their flex blocks for review or assignment help. While this is a good use of some flex blocks, there seems to be a lack of creativity when teachers create their schedules (myself included). In essence, the purpose of these times to offer not only review but also engaging activities. This is tough for all teachers, including myself. Some weeks I find it difficult to expand my flex offerings beyond remedial work. This has led to some issues with our flex program. Most importantly, the enrollment and participation in these has been steadily under 50% (based on conversations with other staff). Ideally the number of students participating should be higher; because they are not leads to a lack of buy-in from some staff. A portion of our staff view these blocks as a waste of time and would rather have time put back into daily classes. Hammond (1997) reflected on potential issues of creating a culture acceptant of change in schools. Her recommendations revolved around creating an environment where teachers become collaborative agents of change. Essentially, Hammond (1997) noted that teachers must be involved in a community type development with input and feedback about proposed change. This concept will be highlighted below.

Personal recommendations for implementation of flexible learning environments (FLEs). While the implementation of FLEs via the flex block has had moderate success at my school, there are a few changes that could be made to possibly improve them. This next section will explore three recommendations for easier implementation of FLEs in schools.

The first recommendation for efficient and positive implementation is the reviewing the notion of FLEs with the staff. Currently the common practice for FLEs in schools is to simply make flexible blocks in the time schedule. Essentially we must not only be flexible in our schedule, but also in our complete learning environments. Our schools should be considering alternative approaches to the total environment which align with 21st century competencies. Hill (2006) highlighted that FLEs can and should vary in their delivery and overall presentation. These variances can be in location, time and structure with the overall emphasis on accommodating student strengths. At my school a Flexible Learning Model could take shape in many different forms. The staff and students would be recommended to work together in order to determine the needs of the class and the shifts necessary to promote the initiatives of FLE's. By allowing the students to have direct impact on the outlook of FLE's in their learning environment, there will be a greater emphasis on student accountability. Students and staff alike would have a sense of ownership over their learning environment and consequentially a sense of pride could potentially be taken in the success of this pedagogical shift. These concepts were noted by Hill (2006) as well as Duffy, Lowyck and Jonassen (1993).

With a wide variety of learning environments, whether virtual or physical, our school can truly provide the foundations of a constructivist learning environment. The constructivist learning environment (as noted by Duffy, Lowyck & Jonassen, 1993) is an environment which is socially co constructed by learners based on their experiences. In the case of FLE's, a positive experience by the student would indicate a successful learning environment. On the contrary however, if a FLE is not successful then the student and teacher would collaborate for an environment more conducive to learning. Essentially, that is the literal beauty of an FLE. Hill (2006) identified this practice as learner negotiation; at a local level there would need to be

learner negotiation amongst students and staff to better the available 'flex block' that we currently offer.

One issue that is in need of repair at the local level (as noted above) is the lack of teacher 'creativity' in the offering of flex blocks. These periods of time are generally dedicated to remedial work, or review or some manifestation of teacher office hours. Students seek out these blocks only when they require assistance or to review for an exam. In reality, these are good uses for the flex block, just not all the time. Realistically, it would be impossible to think that a high school student would want to review subject matter every day during school hours. Therefore, it is imperative that teachers and students collaborate to create a solution to this issue. If the staff and students follow a model of learner negotiation in planning their flex sessions, these types of scenarios would render themselves obsolete. It is understandable that many teachers at my school would be uncomfortable allowing students to design their own flex blocks. Nonetheless teachers must let go of the concept that they need to be the focal point of all decisions in the classroom and need to shift their pedagogy to more of a role as a guide. Anton's (1999) research supports the idea that allowing students to design their learning results in higher achievement and interest. By allowing students to be an architect of their learning (via flex blocks) our FLE's can take on a new and exciting shape, one where students can take pride in their learning.

By incorporating student voice and choice into their flex blocks, many logical solutions could follow suit. Most importantly students would have the opportunity to directly impact their learning environment; and by doing so would create a culture of pride in these flex blocks. Student voice and learner negotiation would solve the issue of teachers only offering one stream of flex block which only is successful on rare occasions. Students could request what they wanted, which could inspire the teacher to create enriching flex blocks for all students. A final

solution which could arise out of student voice and choice would be the manifestation of other forms of FLE's. Currently the focus is on time flexibility; however, multiple other types of learning environments could emerge. These new FLEs would suffice to more accurately reflect the pedagogical shift noted in the *Principles of High School Redesign*.

Personalization through student-centered learning. The theory of personalization as a means of educating students at my school takes on different shapes, all which are mostly related to our approach to FLEs. In our localized context, personalization manifests itself in terms of course completion, accommodated programming and a meticulous implementation of inclusivity in the classroom. While many of these provide a multitude of opportunities for students to have their education tailored to suit their needs, there is much more that can be applied to truly have a positive impact on culture in the classroom and school as a whole. This section will serve to identify current practices at my school in relation to student personalization and will also highlight some of my personal ideas for changes to our system.

Many of the personalized practices at my school are based around complete school driven or district driven initiatives. A great example of personalization that occurs is the creation and use of our '(Leading Successful Learning Center) LSL Center' and the subsequent creation of our accommodations room. The LSL Center is the transformation of our library where students can come work on their own homework, or complete a missed assessment because of an absence. This benefits both the students and the teachers around our school because there is a place for students to complete their work in a more personalized space and the teacher can provide instruction as necessary. Along with this type of personalization, our learning coach also created a Learning Center. This is a secluded space designed for students who are on Personal Learning Plan's (PLP's) to write their assessments under the supervision and assistance of our Education

Assistant's. This has been extremely successful since its inception as many students who use this room have exclaimed positive comments about writing in a better environment to suit their needs. In this scenario, the teacher books an EA online and submits the exam to the learning coach. When it is time for the student to write the assessment they go to the Learning Center and there will be everything they need to write successfully. Many students require accommodations such as a reader, scribe or extra time. It is in this setting where they can get whatever accommodations they need in a safe and caring environment.

Many of the personalized programs offered at my school all revolve around the needs of the student; which in many cases can be a stressful situation for the student. Many students who require accommodations tend to be very sensitive about their needs, therefore by providing a place for them to write can lead to them not having to deal with those stresses. This in turn will positively impact the school culture. These personalized programs provided to the students are designed to help the students who are finding regular programming difficult in an inclusive setting.

Another program offered is called the Part-time Alternative Self-Paced School (PASS) program. This program provides alternative modular subjects for students to complete outside of regular school hours. The modular subjects are to be done at a pace comfortable to the student and there are always teachers available to answer any questions to facilitate the learning process. This type of personalization allows the student to determine how quickly, or slowly they would like to complete the course. By giving this type of choice to the student, it is empowering them to take ownership for their own learning and also providing them with the added responsibility to complete the task in an appropriate timeframe. In this form of personalization students can

assume the main responsibility of being masters of their own learning, and have the capacity to make all decisions regarding the acquisition of information.

The current personalization programs at LSL provide the students with multiple avenues to make academic and educational decisions based on their needs. What is interesting, though, is most of the aspects of personalization mentioned previously are rooted in decisions not made or influenced by student choice. They are merely applications of personalization that were deemed applicable by administration and teachers, often times without student input. This seems to be an educational oxymoron; personalizing education for students without consulting them about what they would like to see from their personal perspective. In the following section I will provide some recommendations to further pursue a truly personalized education for the students in my school.

Recommendations for implementing a personalized pedagogy at school. The current implementations of personalized learning has been successful for students who need this type of pedagogical shift. It is extremely valuable having a resource like the LSL Center and the Learning Center for students to seek out; however, in our quest to personalize, our school has negated a large majority who may not need personalization but want it. As noted in the previous section, the fundamental purpose of the personalization of learning is to allow students to have the ability to chart the course for their own learning. The following section will provide some insight into potential ventures in personalization that will have a positive impact on school culture.

A first consideration in an alternative delivery of personalization should be looking at creating a culture of personalization in the classrooms from a student-directed perspective. In the classroom, students should have voice and choice in the learning process. Currently, students get

to choose which classes they get but do not have any say in the process of their learning which is something they should have control over. Geven and Attard (2012) support the notion that students and teachers should work together to co-create courses and work collaboratively to determine what the lessons should entail. It is understandable that allowing students to have a large impact on their lessons will compromise the necessity of the teacher; but as a matter of fact, the role of the teacher shifts to an extremely important role. The teacher's discretion should be final but it is ultimately very important to allow the students to have a large impact on their learning; after all, it is they who know themselves the best.

The work of Duffy, Lowyck and Jonassen (1993) fully supports the case that students should play a large role in determining their classroom learning. By having students play a large role in their learning, the school culture will shift to an environment that supports student voice and teacher collaboration. It will positively eradicate many issues teachers are experiencing in today's classroom (student apathy, classroom behavior, attendance issues etc.). Naturally the best way to get rid of those challenges is with student engagement, and a common progression from student choice is just that. Understandably, many teachers will be cautious to fully adopt a complete shift to student personalization, yet there are many aspects of the classroom that can be left to student-directed leadership. Anything from the seating plan, to assignments and even displays of learning can be determined by student choice. A recommendation would be to start with small amounts personalization and grow from there.

A second area of personalization in schools would be to reduce the dependency on time as a determinant of student achievement. In our current system, a student's grade is generally determined based on assessments taken over the course of a semester. If the student completes the proper assessments in a timely manner, then in general they will pass the course. A shift of

pedagogy to a more personalized approach to learning would be to allow student to work at their own pace to complete their courses. Currently at LSL we do have PASS, but there are more opportunities for personalization rather than simply offering part time self-paced education. Students should have the ability (in classes) to fast-track their learning if they are showing achievement or if necessary, use more time as a credit recovery course. In the latter case, if students could not complete the course in a regular semester (and have a failing grade) then the teacher should allow the student more time to work on aspects of the course they needed more help. This would be a viable alternative to forcing the student to redo the course and wasting the student's time as well as taking up a potential class spot for another student. In terms of fast tracking, the student would be allowed to progress through the course if they showed a level of achievement required for progress. This would have to be determined by both the student and the teacher (thus the personalization). If they meet an appropriate level then they could progress to the next portion of the course.

These two types of personalization would require the staff of the school to reconsider the aspect of time as a measurement of student achievement. The work of Cuban (2008) as well as Furth and Wachs (1975) support the concept that time has little influence on student learning. The key aspect behind student achievement is based on their ability to comprehend which has little relation to the amount of time a teacher spends in front of them. It is through actual personalization and relationships that teachers have with their students that allow for greater learning and comprehension to occur. In the application of these strands of personalized education, the teacher's role must shift away from time in front of the student to being a constant evaluator of student progress. The removal of the emphasis of time would allow for greater teacher freedom and an enriched classroom where thriving personalization would drive the daily

pedagogy. Overall each classroom would become an ever-evolving environment where teachers and students would use collaboration and pedagogy to conduct lessons, not time.

A final recommendation for schools (which would require massive education reform) would be the removal of standardized assessments. The requirements of an appropriate personalized classroom pedagogy require the removal of standardization as an assessment practice. Personalized learning requires a deviation away from standardization because quite simply, each student is different. Therefore the measurement of academic success is genuinely inaccurate on a standardized assessment. Wolk's (2010) research supports the removal of standardization as a means to further promote a personalized classroom. The research performed by Wolk (2010) indicated that standardization was a framework of knowledge, decided upon by 'experts', that students had to acquire. The demonstration of this knowledge based on standardized assessments, however, generally impedes academic growth with many students. The pedagogy of the classroom is impacted by test results, when in reality it should be co-constructed in a personalized manner between the teacher and the student. In this personalized context, assessment should be based on accomplishments and not standardization.

Creating a truly personalized classroom and school will require a radical paradigm shift in which many teachers could potentially deem too challenging. The reality that exists in terms of this shift is that our students want a say in their education. They want to have some impact and ownership of their learning. It is through active personalization that students can have this responsibility and will be able to determine their own course of learning. A truly important and essential shift in education.

Assessment practices as a pedagogical shift (Mastery Learning). Currently, assessment practices at my school revolve around traditional thinking. That is, teachers use a lot

of mini-summative assessments (i.e., homework, quizzes, and projects) as a means to even out a gradebook average against large summative assessments (unit and final exams). While there is merit to creating a sound gradebook reflective of student achievement, there are many looming issues that result from using this type of assessment practice. This last section will serve to identify current assessment trends at my school and provide sound alternatives to these trends based on the 21st century pedagogical shift of mastery learning.

Traditional assessment practices and the subsequent reporting to an ever changing gradebook can turn our bright minded students into slaves of the percentage. What is meant by this is the following: students become obsessed with their average in class compared to actually caring about their learning and progress. It does not matter what the average on their gradebook actually reflects, all that matters is at the end of the day their average is 'high enough'. To some, an average of 85% percent is not a marker of achievement but a notion that the student has not performed 'perfectly' over the course of the semester. In reality, these grade book averages have consumed student motivation in class, often leading to the infamous question; 'why do I need to do this if it is not for marks?' This is a serious problem, one that cannot be reputably repaired without proper adjustments to classroom assessment practices.

Another pressing issue related to student motivation is the reality that many small assessments (that should be assessed formatively) are counted in the student's gradebook. This will, in turn, inflate a student's average and not report an accurate grade for that child. This adds to students lacking motivation on exams because their average is 'supported' by their classroom formative assessment. This gives students a false sense of security in classes because when they get to a higher level course, their averages tend to drop. Immediately their reaction is to criticize the teacher or the course, but in truth their average is no longer supported by an abundance of

‘mini-summative’ assessments. The student could lose even further motivation in the course because not only did their average go down, but there is no way to ‘make up’ for their poor grade. This completely disregards the fundamental purpose of assessment, both formative and summative.

While many teachers are formally introduced to the main themes of formative assessment, the depth of practice does not tend to expand beyond the superficial. When examining the assessment practices of teachers in the classroom, a normal first reaction is that there is not enough time to assess formatively. Teachers often feel pressed to complete curriculum in the short amount of time allowed in a semester (especially in a high school). However, by creating dozens of ‘mini-summative’ assessments, teachers are bombarded by marking and reporting when much of that effort could be channeled to quality formative assessment. A fundamental flaw in ‘mini-summative’ assessment is the noticeable lack of individual student/teacher interaction. There must be times where a teacher sits down individually with each student to track progress and provide feedback (formatively) to ensure academic growth in the classroom. While it is unreasonable to expect teachers to sit down with all students on a daily basis, this practice should be done more than once a semester (at reporting time). Teachers can also employ varying degrees of formative practices in classrooms to gauge student understanding without subjecting them to more graded assessment. Some examples of these will be highlighted in the following section.

Without proper formative assessment, there is a strong possibility some students will not experience appropriate educational growth. It is important to note that all students require timely, personal formative assessments; not just the students who are failing the class. Without

appropriate amounts of formative assessment it could become a real possibility that the teacher is failing the students.

Mastery learning as an assessment practice. Traditional assessment practices have had moderate success in a traditional classroom, with traditional learners. Nonetheless, with a shift of education supporting 21st century pedagogy, there must be a shift of assessment as well. The following section will serve to highlight important practices that must be undertaken for proper formative assessment. This section will also provide an example of a 21st century assessment model called 'Mastery Learning'.

Quality formative assessment must have student success as its fundamental purpose. Success in this case does not come from an arbitrary average but is based solely on student improvement. Formative assessment must be used to proactively check in with students to ensure they are grasping the material that is being learned. Kumar (2013) noted the benefits of quality formative assessment when it is used collaboratively by teachers and students to direct the path of learning. By allowing students and teachers to communicate about the learning practice will empower students to be responsible for their own learning and could intrinsically motivate them to improve. Simultaneously, the teacher can use the formative practice to adjust the necessary course of future lessons to accommodate the comprehension of the class.

Another aspect of quality formative assessment relates to the frequency and timeliness of the practice. By incorporating frequent formative assessments, teachers will be forced to constantly adjust their practices to ensure students are successfully understanding what is being taught. While this can be taxing on the teacher and does require a lot of work, the benefits for the class are extremely positive. That is why it is important that teachers formatively assess early and often. Fuchs and Fuchs (1986) as well as Black and Wiliam's (1998) both express appreciation

for this style of formative assessment. Both note that through this application of teaching and assessment practice students can produce substantial learning gains. By following this assessment practice, teachers can be more confident about the abilities of their class before assigning summative assessments. It should be noted that for this practice to function properly, no summative assessment should be given until the teacher deems the student ready. That is why it is vital the teacher play an active role in the formative assessment practice.

While timeliness and frequency play an important role in the formative practice, it is rendered essentially useless unless the teacher provides the student with valuable feedback. The primary consideration for proper formative assessment is to provide feedback that does not have any marks associated with it. Marks tend to distract students, especially in cases where teachers are shifting their assessment practices. Feedback free of numbers will allow the student to focus directly on the comments they receive. The feedback given to the student should provide guidance for both strengths and weaknesses. The main point of feedback is to allow the student to reflect on their performance in order to determine (with the teacher in some cases) what they need to do to growth their capacity of learning. Black and Wiliam (1998) as well as Griffin, Care and McGaw (2012) have determined that proper feedback is fundamental to the growth of the learner in the classroom as well as the overall success of proper formative assessment. For this to be successful the student must be consulted in all steps of the process.

In relation to student consultation, it is equally important that formative assessments are scaffolded in their delivery and allow for students to demonstrate knowledge through multiple contexts. Students should be able to demonstrate their learning in a manner that is most comfortable to them. Drake and Reid (2010) acknowledge that student demonstrations of learning should be varied in their assessment as personalization is key to appropriate formative

assessment. By allowing students to demonstrate their learning in a manner that is best for them, there is a greater opportunity for enrichment in the classroom. Also, in a formative context the most important aspect is that students can display their learning and demonstrate their level of comprehension. This will create an environment where student improvement and learning is most paramount; not a classroom where grades are important. The main goal for quality formative assessment is not that the teacher has more work, but in fact that students become advocates for their own learning. Supported by Neill (1997) formative assessment should teach the students to become reflective and appropriately critical of their own learning. The environment created would encourage students to evaluate their own work and determine their own course for learning. The teacher is in place to ensure this process occurs, but essentially the goal for a quality formative classroom is that students will be able to learn and grow without complete reliance on the teacher.

The Mastery Learning Agreement. Over the course of this project I had been extremely interested in improving my formative assessment practice. One by-product of this research was the creation of a ‘Mastery Learning Agreement’ (all documents associated with this section are available in the appendix). This agreement, in essence, is a step away from traditional assessment models.

The emphasis of mastery learning is the notion that the only assessments that count in my social studies classroom were unit end summative assessments (multiple choice exams, essays). Essentially the only assessments that would contribute to a grade would be anything that would be counted on a social studies diploma examination (at the end of grade 12). All other assessments would be formative. The catch for this agreement specifically is that students must achieve a level of ‘proficiency’ before being allowed to progress to the summative assessment. It

was determined that in my class the students would have to repeat formative assessments or demonstrate their comprehension of concepts to me before I allowed them to write the exam.

The purpose of this agreement is provide students with feedback related to necessary growth rather than simply giving them a quiz and moving on. If a student was not prepared to write the summative assessment then I would take time to individually shift my teaching to make sure they could learn the needed concepts. Often times this could mean that I would need to take time out of regular class to make sure this will occur. The overall impact of this agreement is to refine my pedagogy and ensure I know all of my students are adequately prepared to write the summative assessment. In doing so, students will have more opportunity to grow as learners with less emphasis on quiz and homework completion. The measurement of success is simply the ability to write the summative assessment.

Attached in the appendix is the Mastery Learning letter that would be sent to parents, as well as a copy of the mastery learning course outline for a Social Studies 30-1 class.

Chapter Summary

When comparing the current practices in my school to the notions behind 21st century shifts of pedagogy it should be noted that we are consciously improving our practices. In consultation with the recommendations set forth in this chapter it is my sincere hope that the shift to adoption for teachers is much more palpable. By continuing to modernize our pedagogy, our students will reap the benefits of a better education system.

It is my intention to use the findings of my research to further promote the 21st century pedagogical shifts at a local level, with the intention of developing a program for all teachers to access via PD. Currently, I am using my position as TRANSFORM lead leader to effectuate change with teachers at LSL.

I am hoping to help teachers create a small ripple of change in their pedagogical approach in their classrooms and assist them in seeing the benefits of creating a positive change. By working with teachers one-on-one, I will be able to develop locally based pedagogy that will be subject specific. While I may not have content knowledge in their area of expertise, I would be able to use my knowledge of pedagogy to support their teaching. Essentially by working with teachers in different areas of expertise and allowing them to be successful in their pursuit of modernizing their practice, my intention would be for them to pass on their successes to other teachers in their department. The idea here would be that teachers understand the need and attempt to shift their pedagogy knowing that I as the coach would be there to support them.

These small ripples of change could lead to a large-scale project based upon a shift of pedagogy. Essentially, what the education system is missing is a functional approach to 21st century pedagogical shifts. Currently, we have government documents and academic reference as to the need for a shift yet there is little documentation of how shifts can be accomplished. A long term goal for the future of this project would be to become involved in a project that seeks to assist teachers in accomplishing functional pedagogical change. There has always been a strong focus on content knowledge in teachers, but often what tends to go unassisted in development of better teaching practices.

The education system (especially in Alberta) requires a guide to successful pedagogical change, especially one where teachers are at the center of the creation. It would be a professional goal for me to be able to become involved in a project where this was the focal point. It is my hope that the work conducted in this project, will lead me to further endeavors where teaching 21st century students in a manner suited to their needs is of utmost importance.

Chapter 4: Comprehensive Capstone Research Experiences

Introduction

Over the course of the past two years, my experiences and comprehension of curricular leadership, pedagogy and the various roles of a teacher in the classroom have grown exponentially. Personally, I have become much more aware of my ability to conduct pedagogy using sound research as a basis for improvement. I have also grown as a leader in my school; thanks to the academic background of the coursework and capstone project I have been called on to be a leader of my school's pedagogical shift. I have also had the opportunity to work very closely with people across Alberta in ways I did not think would be possible. I consider myself very fortunate to have been in this program and I have no doubt the experiences I have been blessed with will continue to drive my growth as an educator.

This chapter will serve to summarize the impacts this program has had on my educational path and will also highlight some fundamental influences my capstone project has had specifically on my pedagogy and teaching practices. The following pages will chronicle my personal journey and experiences with the project and the lasting legacy it has had on my professional career.

Shifting professional thought

Prior to the beginning of this program, my knowledge of academic research on education was based around coursework and readings from my undergraduate degree. Even then, my experiences with the works of Piaget and Vygotsky were essentially rooted in a very generalized category. Additionally, it had been a while since I had any intention of reading educational philosophy. There was not a great pressure to become familiar with education policy and

academic research in an undergraduate setting; it was clear that this was to change once I entered the first class.

The expectation of research and knowledge of seminal educational philosophers was apparent from the first week in class. This was quickly highlighted by a great activity with our cohort that involved an important chapter written by Elliot Eisner (Educational Objectives, Help or Hindrance). Our professor assigned this reading prior to the first meeting date and I can distinctly remember going through the reading and being very nervous for the program. Eisner was a tough read. However on the first day we were divided into groups and were responsible for analysing a specific section of the chapter of reading. Each section was based upon an ideology of teaching Eisner was discussing. I was fortunate to be in the group that summarized and presented on Eisner's *Progressive* ideology of teaching.

This small activity was extremely important to my journey for two reasons. The first reason was that it demonstrated to the class that although there will be material that would be difficult to comprehend, we will have a cohort of people to support (including professors). The second and more fundamental reason this activity was important, was based upon the fact that much of my research after reading and analyzing Eisner has been through the progressive lens of education. As the program continued I found myself becoming more and more interested in progressive education philosophy and had begun to seek out philosophers and use their work as references for my assignments and projects. I was also becoming much more aware of the abundance of great educational philosophy available and was genuinely enjoying the work I was reading. Proving to be a great metamorphosis considering my experiences with academic research prior to the beginning of the program.

Not only has this program influenced my inner student, but I find that professionally I have been much more aware of initiatives that are being implemented by my school district and the government of Alberta. Most significantly, as a professional, I am consistently researching educational research to legitimize shifts in education and to support decisions I am making in class as a teacher. It is much more important for me now to apply some critical research to potential practices I want to implement in my classroom.

The most notable example would be the research conducted on Mastery Learning (discussed in chapter 2 and 3). Mastery Learning is an initiative that is currently being explored by some classrooms in the province. One key attribute of this initiative is that this shift will look different in every classroom; therefore, I wanted to conduct quality research about this topic before jumping into this practice in the classroom. It is important for classroom pedagogical shifts to be precise, timely and calculated in their delivery. With this notion in mind, much research was focused on the delivery of quality formative assessment (as written by Black and Wiliam, 1998. Their research was considered against other thinkers (e.g., Drake and Reid, 1998; Neill, 1997) and this was used to determine the significance of the Mastery Learning initiative. Personally, this research was important to conduct prior to implementation in order to facilitate the potential shift of practices in the classroom.

This brief example illustrates the shift of professional thought that I have experienced as an education in terms of implementation of educational practices. Without the exposure to educational philosophy and academic research methods, it is possible that my professional thinking would have led me away from appropriate research and simply dive into the initiative without proper consideration.

Shifting of Educational Practice

Aside from implementing new educational initiatives in the classroom, I am alternatively finding my teaching practices in the classroom have shifted as well. A noticeable shift would be that I have gained a more empathy with students who are struggling in class. By being a student myself, I can relate with the high pressures of handing in assignments and maintaining a certain level of sanity and manageable levels of stress. This has caused my practice to shift by reducing the amount of homework I assign the students. I allow them to have more time in class to clarify if they are misunderstanding a concept. I also am much more aware of their personal struggles (if they have any) outside of the classroom. By becoming more empathetic with the students, they tend to reciprocate the level of respect I have for them. This in turn results in a much more positive classroom experience for both myself and my students.

Another influence this program has had on my teaching revolves around the research I have read (both for the project and for general interest). Because the influence of the academic research I have read, I have been perpetually refining my teaching practices. By changing aspects of my classes and pedagogy my students have been much more engaged in the content of my lessons. It is understandable that not all students will be excited for their social studies class, so by continually shifting small aspects of my pedagogy and classroom activities, my students are excited about learning in general. Continually shifting activities and introducing new techniques (acquired from research) my students remain 'on their toes' and the lessons are very exciting to teach.

Overall the most significant aspect of this project and program alike is the ability to test out theories learned on my students and in my school environment. Although I remind my

students on a seemingly weekly basis they are 'guinea pigs' for my educational adventures, they seem to really embrace the fact I am taking risks and trying something new. This could never be accomplished if I was taking this program without teaching at the same time. Similarly it is through knowledge gained in the program that has allowed me to try new things in class and I am very thankful I have had the opportunity to do so. This program has holistically allowed me to grow my professional knowledge and has allowed me to continually refine my teaching practices.

Experiences and Application of Project in the Future

As a reflection of my journey over the course of the program, there are so many positives that can be extracted from this process. One fundamental positive that can be taken from this process is the fact that the M. Ed. program has reinforced my desire to be a lifelong learner. I have truly found a subject that I am passionate about and I really want to continue to remain exposed to important research related to 21st century educational practices. It is very important for teachers to continue to refine their practice through sound professional development and education, I am very happy that I have found a passion for this because in the long run it will make me a better educator. The ability for a teacher to perpetually refine their practice through sound research will foster higher degrees of excellence in their students.

Personal interactions and networking via the project. The research conducted in the project has allowed me to expand my professional connections across the province of Alberta in a very quick manner. Firstly, having a cohort model of program has allowed for the direct ability to work with educators and administrators from across Edmonton. This model has been important for my professional growth as our group has been able to share our ideas and

experiences freely in a supportive community setting. Not only has this been great for my sanity, but it has also exposed me to ideas that I have used myself in my classroom. Our cohort group has also been great in terms of our own personal experiences. We have a mix of administrators, elementary, junior high and high school teachers each with very unique backgrounds. This mix of professional experience has allowed me to garner education in fields I had never even considered previously.

Another key aspect of educational experience I have been exposed to, is because of the nature of my capstone project. Thanks to some of the leadership roles I have assumed (due to the project itself, highlighted later in the chapter) I have been able to interact and engage in discussions with school superintendents, principals, and various other key educational stakeholders from across Alberta. These engagements have allowed me to gain new insight on the impact of teachers on education. They have also allowed me to share my research and experiences with professionals with whom many teachers rarely have contact with. I have been very fortunate to have authentic and important discussions with these people. As mentioned previously, it is through these experiences that teachers can grow their practice exponentially. Often teachers are narrowed into their own classroom and are overly concerned with only their instruction and pedagogy. While this is important, it is also necessary to engage in important discussions with other professionals who are involved in the educational process.

The impact of this program on my future career goals. Prior the beginning of the project, I assumed the role of department head at my school. This position traditionally had the focus of improving curricular outcome achievement for students. The role of the department head was to ensure this was being accomplished at a local level. Once I undertook research into the 21st century shifts, I wanted to shift the role of a department head.

Based on the nature of my project, I really believe there needs to be a pedagogical shift to match the current educational landscape of our schools. I would like to start with my department and facilitate important pedagogical shifts studied in the project (Mastery Learning, Flexible Learning Environments, and Personalization). In order for this to be successful, I would need to foster a sense of confidence in the ability for my department to assume these changes. Therefore in order for this shift to be successful, my role as department head would need to assume more responsibility for teacher pedagogy. I would like to present some of my findings to my staff and play a very supportive role as department head. Ideally, if my department assumed some modernizations and there was an element of success I would further the expansion of this to other departments and teachers in the school. The facilitation and implementation of these shifts will hopefully create a ripple across the school and each department can take the initiative and institute shifts for their subject areas. Although this would take a while to institute, I truly believe that I could foster the leadership capacity for this to be successful.

In terms of career advancement, one of my goals for the near future would be to become the Social Studies district consultant. A brief description of the role is to provide Professional Development and resources for all social studies teachers in my school district. The consultant's role is to also provide support (classroom and other) for teachers to ensure appropriate social studies instruction. The current consultant does a great job at providing teachers with support and resources at a district level that support content and curricular delivery. My school district is very fortunate to have subject-based consultants to support teachers across Edmonton.

While the current focus of the district consultant job is very valuable, I would offer a modernization to this position. Currently, there is a heavy emphasis on content knowledge and delivery and a significant lack of emphasis on pedagogy and 21st century educational practices.

If I were to assume the role of consultant, I would work on competency based instruction with a focus on modernizing pedagogy to meet student needs (which is the basis of my project). There would still be a focus of content knowledge and application in teaching, however this would be done in conjunction with refining teacher pedagogical skills. A major focus of mine as a consultant would be to align specific curricular skills necessary in social studies (critical thinking, analysis of information and writing) across all levels and grades. One method of accomplishing this goal would be to align specific pedagogical practices across classrooms to ensure students are achieving basic skills necessary for their future educational careers. By modernizing pedagogy at a district level, students will be able to build their learning capacity at a much greater rate.

A goal for the distant future is to eventually assume an administrative leadership role. I would like to use my experiences learned in this program and project as a means to lead a school through a pedagogical shift. Currently I am the Department Head of Social Studies which contains some leadership capacity, but in the near future I would like to shift my career into administration and teacher leadership. One of the main reasons I would like to become an administrator is to shift the view of the role from traditional disciplinarian and staff manager to a more modern view of leadership coach and teacher support. The research conducted in this capstone project has enlightened me to the potential of a whole school shift and refinement of practice. As an administrator I would like to coach teachers through the 21st century educational shifts and allow them to explore pedagogy they find personally the most satisfying. My role would be less based on direct leadership, and more focused on a distributed model that would allow teachers to personalize their development of pedagogy. I would not want to rush into the role of administrator immediately as I would personally like to refine my practice further in the

classroom and become a better educator.

Overall, this program has opened many doors for me professionally. It has allowed me to gain a lot of knowledge about current academic research, has enlightened me personally into refining my own practices in the classroom, and has most definitely sparked a keen interest in educational research. It is my hope that I will use this project as a springboard to furthering my professional development and simultaneously making me a better teacher in the classroom.

Three Recommendations for Teachers Interested in 21st Century Pedagogy

The topic of 21st century educational shifts has been at the forefront of educational research and classroom discussions for over a decade. One key feature of this topic is that it is highly contested among professionals in the educational field. It is important to take into account the following recommendations when considering pursuing a project about 21st century educational shifts.

1. Keep up with the latest educational research in the field of 21st century learning, as it is a relatively 'new' topic. Academics and teachers alike are constantly providing great suggestions and rationale for this, so it is important to keep up with academic trends.
2. Be prepared to relinquish some power in the classroom. One of the fundamental features of 21st century learning is the role of the teacher shifting to more of a coach or guide for student learning. If you are unable to do this, then the topic of 21st century education may not be appropriate.
3. Many stakeholders in education are resistant to change because it is unknown and scary. It is okay for you to fail in some aspects of modernizing practice (that is part of growth). It will be a difficult task to try and change some people, but a key aspect of

facilitating change is visual progress. So make sure you start with small changes and celebrate the success of these.

When implementing a new theory or shift to a group of teachers there is bound to be some criticism from some staff. It is important to highlight and celebrate small successes in the classroom and school; that positive reinforcement will foster growth and acceptance in the staff.

Conclusion

Over the course of the past 2 years, this program has allowed me to explore topics in education that I was genuinely interested in. With this culminating project, I can say with certainty that I have grown exponentially as an educator and my practice in the classroom has improved tenfold. I am very thankful to all who were involved in supporting me through this project and I look forward to seeing the fruits of my research later in my career.

References

- Anton, M. (1999). The Discourse of a Learner-Centered Classroom: Sociocultural Perspectives on Teacher-Learner Interaction in the Second-Language Classroom. *The Modern Language Journal*, 83(3), 303-318.
- Black, P., & Wiliam, D. (1998). Inside the black box: Raising standards through classroom assessment. *The Phi Delta Kappan*, 80(2), 139-148.
- Cuban, L. (2008). The Perennial Reform: Fixing School Time. *Phi Delta Kappan*, 90(4), 240-250.
- Darling-Hammond, L. (1997). What matters most: 21st-century teaching. *The Education Digest*, 63(3), 4.
- Drake, S. M., & Reid, J. (2010). Integrated curriculum: Increasing relevance while maintaining accountability. *What Works*, 28, 1-4.
- Duffy, T. M., Lowyck, J., & Jonassen, D. H. (1993). *Designing environments for constructive learning*. NY: Springer Publishing Company, Incorporated.
- Engle, S. H. (1960). Decision making: The heart of social studies instruction. *Social Education*, 24(7), 301-304.
- Fijal, G. (2013). High school flexibility enhancement pilot project: A summary report. *Alberta Education*. Edmonton, Alberta. Retrieved From:
https://ideas.education.alberta.ca/media/78910/hsepp_report_2013final.pdf
- Furth, H. G. (1975). *Thinking goes to school: Piaget's theory in practice*. Oxford University Press.
- Geven, K., & Attard, A. (2012). Time for Student-Centred Learning?. In *European Higher Education at the Crossroads* (pp. 153-172). Springer Netherlands.

- Gold, Y., & Roth, R. A. (1993). *Teachers managing stress and preventing burnout: The professional health solution*. Psychology. London; Washington, D.C: Falmer Press.
- Goodlad, J. I. (1984). *A place called school: Prospects for the future*. NY: McGraw-Hill.
- Gosper, M., & Ifenthaler, D. (2014). Curriculum Design for the Twenty-First Century. In *Curriculum Models for the 21st Century* (pp. 1-14). Springer New York.
- Government of Alberta Department of Education. (2010). *Inspiring Education A Dialogue With Albertans: Steering Committee Report*. Edmonton, Alberta. Retrieved From: <https://ideas.education.alberta.ca/media/14847/inspiring%20education%20steering%20committee%20report.pdf>
- Government of Alberta Department of Education. (2011). *Foundational Principles of High School Redesign: Flexible Learning Environments*. Edmonton, Alberta. Retrieved From: <https://ideas.education.alberta.ca/media/74565/flexiblelearning.pdf>
- Government of Alberta Department of Education. (2011). *Foundational Principles of High School Redesign: Mastery Learning*. Edmonton, Alberta. Retrieved From: <https://ideas.education.alberta.ca/media/78778/masterylearning.pdf>
- Government of Alberta Department of Education. (2011). *Foundational Principles of High School Redesign: Personalization*. Edmonton, Alberta. Retrieved From: <https://ideas.education.alberta.ca/media/74577/personalization.pdf>
- Grant, M. M., & Hill, J. R. (2006). Weighing the risks with the rewards: Implementing student-centered pedagogy within high-stakes testing. *Understanding teacher stress in an age of accountability*, 19-42.
- Griffin, P., Care, E., & McGaw, B. (2012). The changing role of education and schools. In *Assessment and teaching of 21st century skills* (pp. 1-15). Springer Netherlands.

- Hill, J. R. (2006). Flexible learning environments: Leveraging the affordances of flexible delivery and flexible learning. *Innovative Higher Education*, 31(3), 187-197.
- Hunzicker, J. (2011). Effective professional development for teachers: A checklist. *Professional development in education*, 37(2), 177-179.
- Johnson, C. E., & Templeton, R. A. (2011). Preparing Teachers for the 21st Century: A Renaissance. In *Bringing Schools into the 21st Century* (pp. 113-135). Springer Netherlands.
- Jonassen, D. H. (1999). Designing constructivist learning environments. *Instructional design theories and models: A new paradigm of instructional theory*, 2, 215-239.
- Kay, K., & Greenhill, V. (2011). Twenty-first century students need 21st century skills. In *Bringing schools into the 21st century* (pp. 41-65). Springer Netherlands.
- King, A. (1993). From sage on the stage to guide on the side. *College teaching*, 41(1), 30-35.
- Kumar, A. (2013). Formative assessments as pedagogic tools. *International Journal of Human Sciences*, 10(1), 750-759.
- Neill, D. M. (1997). Transforming student assessment. *Phi Delta Kappan*, 79(1), 34.
- Noddings, N. (1995). A morally defensible mission for schools in the 21st century. *The Phi Delta Kappan*, 365-368.
- Noddings, N. (2003). *Happiness and education*. Cambridge University Press.
- Noddings, N. (2013). *Education and Democracy in the 21st Century*. Teachers College Press.
- Noddings, N., & Ebooks Corporation. (2012). *Philosophy of Education*. Boulder, Colo: Westview Press.

- Pataray-Ching, J., & Kavanaugh-Anderson, D. (2000, March). Supporting learner-generated inquiries. In *The Educational Forum* (Vol. 64, No. 1, pp. 58-66). Taylor & Francis Group.
- Rovegno, I. (1994). Teaching within a curricular zone of safety: School culture and the situated nature of student teachers' pedagogical content knowledge. *Research Quarterly for Exercise and Sport*, 65(3), 269-279.
- Scott, C. A. (1994). Project-based science: Reflections of a middle school teacher. *The Elementary School Journal*, 75-94.
- Toshalis, E., & Nakkula, M. (2012). Motivation, Engagement, and Student Voice: The Students at the Center Series.
- van Merriënboer, J. J., & Stoyanov, S. (2008). Learners in a changing learning landscape: Reflections from an instructional design perspective. In *Learners in a Changing Learning Landscape* (pp. 69-90). Springer Netherlands.
- Wiley, C. (2000). A synthesis of research on the causes, effects, and reduction strategies of teacher stress. *Journal of Instructional Psychology*, 27(2), 80.
- Wismath, S. L. (2013). Shifting the teacher-learner paradigm: Teaching for the 21st century. *College Teaching*, 61(3), 88-89.
- Wolk, S. (2007). Why go to school. *The Phi Delta Kappan*, 88(9), 648-658.
- Wolk, R. (2010). Education: The case for making it personal. *Educational Leadership*, 67(7), 16-21.
- Yonezawa, S., McClure, L., & Jones, M. (2012). Personalization and Student-Centered Learning: The Students at the Center Series.

Appendix A.

Master Learning Agreement Letter

RE: Mastery Learning Assessment Model in Social Studies 20-1 and 30-1

Dear Parents,

As I am sure you are aware, Louis St. Laurent is going through many exciting changes according to the High School Redesign initiatives (<http://ideas.education.alberta.ca/hsc/redesigning/>). The Social Studies Community of Practice (COP – formally called department) has taken on a leadership mentality in regards to implement change in our school community.

In our social 20-1 and 30-1 classes this year, the students will be assessed using a Mastery Learning Assessment Model. The explanation from the course outline is as follows:

The course final mark will be determined by student performance on end of unit exams and assessments in each of the units. Students will be advised to write the unit exam only after achieving a proficiency score (70% or better) on major formative assessments (quizzes or practice tests) leading up to the end of the unit. Students will be permitted to attempt the formative assessments as often as required to achieve the proficiency score. The course will end upon the completion of the summative assessments for the four units. The final grade will be determined based on the average of the weighted units.

Amendments to the agreement, are as follows:

- a. Included in the summative assessment (for marks) will be one major project per unit; the project grading will be according to a specified rubric that all classes will have.*
- b. If students do not achieve mastery level (of 70%) on a major summative assessment they may re-write ONLY if they meet the following criteria:*
 - i. Student has ZERO unexcused absences during the time of the unit.*
 - ii. Student must attend TWO flex sessions, and demonstrate an effort to learn skills at a mastery level (as determined by your teacher).*

If these are accomplished in a timely manner, then a re-write can take place, at the discretion of the classroom teacher.

The shift of a mastery learning model provides the students with the opportunity to comprehensively grasp the curriculum through performance based assessments, before being evaluated for success. The exercise of completing various formative assessments will allow our students to take a greater accountability for their learning as well as the ability for teachers to communicate appropriate feedback for student improvement. This process will allow for a deeper understanding of content prior to completing a summative assessment and will be conducive to student success.

Our COP is taking this flagship approach to learning as a means to ensure our students are receiving formative assessment as a means to providing feedback which will be used to move the student forward in their learning. This combination of teacher communication paired with student accountability for their learning will allow the student to achieve curricular mastery.

If you have any questions about this, please feel free to contact me at school via email or phone.

Thank you very much,

Vince Bustamante

Social Studies Key Instructional Leader (KIL)

Vicente.Bustamante@ecsd.net

(780) 435-3964 ext. 257

Appendix B.

Mastery Learning Course Outline (Social 30-1)

Social Studies 30-1 Mastery Learning Course Outline+

Mr. Vince Bustamante **Vicente.Bustamante@ecsd.net** **Room 257**

Course overview:

Students will explore the origins and complexities of ideologies and examine multiple perspectives regarding the principles of classical and modern liberalism. An analysis of various political and economic systems will allow students to assess the viability of the principles of liberalism. Developing understandings of the roles and responsibilities associated with citizenship will encourage students to respond to emergent global issues.

Course Content:

Social 30-1 will focus on the following key issue: *To what extent should we embrace liberalism?* Other key questions for inquiry covered include:

- ✓ To what extent should ideology be the foundation of identity?
- ✓ To what extent is resistance to liberalism justified?
- ✓ To what extent are the principles of liberalism viable?
- ✓ To what extent should my actions as a citizen be shaped by an ideology?

Evaluation: Students will be evaluated in a variety of ways throughout the course. At the end of each unit, there will be a unit exam and essay. The teacher reserves the right to individualize assessment based on student needs and professional judgment.

| School Based Assessment 50% of final grade | Diploma Exam 50% of final grade |
|--|---|
| Related Issue 1 15% | 50% Part A Written (Source Analysis 15%; Essay 35%) 50% Part B Multiple Choice |
| Related Issue 2 35% | |
| Related Issue 3 35% | |
| Related Issue 4 15% | |
| ** Assessment will be graded according to a Mastery Learning Assessment model (See Below). ** | |

STUDENT EXPECTATIONS:

- ✓ Regular Attendance and Punctuality
- ✓ Being an active learner: Participating in class, completing homework
- ✓ Completing homework and assignments **on time, to earn chance at writing the Unit Summative Assessments**
- ✓ Keeping up with Current Events
- ✓ Arranging time to meet with me for assistance

- ✓ Checking the virtual classroom for hand -outs, lessons, due dates

Intellectual Honesty

All work submitted for evaluation should be your own work and not copied in whole or part from any source.

- ✓ Intellectual dishonesty includes copying the classwork, homework, or lab work from another student.
- ✓ Intellectual dishonesty includes the actual giving or receiving of the work of another student for the purpose of copying.
- ✓ Plagiarism includes the copying of or representation of another's work as one's own.
- ✓ Plagiarism includes claiming as your own work information from the Internet.

There is a fine line between discussing ideas with others and actually supplying information or having information supplied to you. Collaboration with other students can assist with your understanding of the materials but always have the final product be of your own ideas, words, and design.

Required Materials:

- ✓ Fielding, Harding, Craig, Meston, John, Smith, Tom, Yoshida, David. Perspectives on Nationalism. Ontario: Oxford University press.2009.

Learner Needs

- ✓ A wide range of assessment information is used in the development of a student's grade. At Louis St. Laurent High School, individualized assessments provide specific information regarding student progress and overall performance in class. Assessment criteria reflect differences in student needs and learning styles, and therefore may vary from student to student in the same course. Varied criteria exemplify best teaching practice and may be applied by the teacher as appropriate.

What does it mean to be a Mastery Learner?

- ✓ The course final mark will be determined by student performance on end of unit exams and assessments in each of the units. Students will be advised to write the unit exam only after achieving a proficiency score (70% or better) on major formative assessments (quizzes or practice tests) leading up to the end of the unit. Students will be permitted to attempt the formative assessments as often as required to achieve the proficiency score. The course will end upon the completion of the summative assessments for the four units. The final grade will be determined based on the average of the weighted units.

Other Important Information:

- ✓ Students must have an excused absence in order to write missed exams, quizzes or essays. **It is a student's responsibility to arrange an alternate time to write missed assessments.**

- ✓ Students must submit assignments in a timely manner. **Failure to comply will result in the inability for the student to write the unit summative assessment at the discretion of the teacher.**
- ✓ Be on time for class. Failure to do so could result in not being admitted. **THIS IS NON NEGOTIABLE.**
- ✓ This is an academic class which requires effort both during and outside of class time. Expect homework assignments at least three times a week, and be prepared to complete them in order to be successful.
- ✓ I am available in the morning at 8 am and during scheduled flex blocks. If you need to talk to me after classes you will have to make an appointment. Please remember this when you would like assistance or have questions. E-mailing me is the most effective way to arrange a time to meet if I am not at school.
- ✓ Use of flex blocks can be directed for the student at the discretion of the teacher. If the teacher requires the student to attend the flex, this option is non-negotiable according to the mastery learning agreement.