Grade Ten Students’ Agentic Engagement Within Project-Based Learning

A Dissertation

Submitted to the Faculty of Education
In Partial Fulfillment of the Requirements
for the Degree of
Doctor of Philosophy in Educational Studies
University of Prince Edward Island

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Charlottetown, PE
March 27, 2017

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DEDICATION

To Cecilia, my daughter, whose agentic engagement inspired this study.
“I seek your guidance,” I said. “Then, guidance you shall receive,” said Dr. Sean Wiebe. And so the journey began.

To my supervisor, Dr. Sean Wiebe, and supervisory committee, Dr. Ronald MacDonald, and Dr. Peter Gouzouasis, I bow with deep respect and gratitude. A most sincere thank you for accepting me as your student and mentoring me in your inimitably wise ways. For the many drafts you’ve reviewed, and for your keen critically constructive feedback, I remain grateful. May students everywhere experience the nurturing care and scaffolding that you've offered to me.

The external examiner, Dr. Anne Burke and the internal examiner, Dr. Alexander (Sandy) McAuley, to you both I express thanks for your thoroughness and insights. I am grateful to the current Dean, Dr. Ronald MacDonald, former Deans, Dr. Miles Turnbull, Dr. Tim Goddard. The Graduate Coordinators, present and the past, Dr. Tim Goddard, Dr. Liz Townsend and Dr. Martha Gabriel for their encouragement and support. I extend heartfelt appreciation and thanks to the Administrative staff members of the Faculty of Education, especially, Cathy Hennessey, Karen-Anne O’Halloran, Jill Ross, Linda M. Callaghan, and Beverly Anne McQuillan who offered support in many ways, always with a smile.

My Ph.D. colleagues and co-students, especially Dr. Janet MacIntyre, Dr. Maryam Wagner, Dr. Bonnie Stewart, Dr. Verne Lorway, late Jim Rodd, Gabriela Sanchez, Mary MacPhee, Alaina Roach O’Keefe, Valerie Campbell, Brittany Jakubiec, Patricia Altass, Olive Bryanton, Michele Moffat, Tim McRoberts, Charlene VanLeeuwen, Zain Esseghaier, Amanda Brazil, and Suha Al hatholi, to you all I am grateful for the many ways you’ve supported me, your
words of encouragement, and the inspirational discussions we've had during our memorable get-togethers.

I also express my gratitude to the broader volunteer networks of which I am privileged to be a part. Your support of my study helped it reach completion. Special mention goes to members of the Cooper Institute, particularly Dr. (Hon.) Marie Burge and Ms. Irene Burge, and board members and senior executive of the of the Association for Newcomers to Canada, PEI (PEI ANC), especially the past President of the Board, Mr. Shawn Murphy, and the Executive Director, Mr. Craig Mackie.

“One drop at a time,” my husband, Dr. Cyril Roy, reminded me and kept nudging me on. He stood by me as a pillar of strength, and with never dimming confidence helped me persevere. He saw the finish line even when it was more than a blur for me. For all that and more, I am grateful.

Deep understanding beyond her tender years, was my daughter's gift to me. Cecilia's thoughtfulness and sensitivity carried me through many a tough day. Her experiences inspired me to undertake this study, and to her, this dissertation is dedicated, with gratitude.

To my family and near ones, who supported with great love and care, I remain indebted. My mother, Lily Mary, father, John Bosco, sister, Mary, brothers, mother-in-law, father-in-law, sisters-in-law, brothers-in-law, and several others, you’ve provided feedback on my work, served up soul food, supported and encouraged, and never let geographical distances be an impediment.
# Grade Ten Students’ Agentic Engagement Within Project-Based Learning

## Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Abstract</strong></td>
<td>1</td>
</tr>
<tr>
<td><strong>Chapter One: Introduction</strong></td>
<td>5</td>
</tr>
<tr>
<td>Rationale</td>
<td>5</td>
</tr>
<tr>
<td>Background</td>
<td>8</td>
</tr>
<tr>
<td>Definitions</td>
<td>14</td>
</tr>
<tr>
<td>Agentic Engagement</td>
<td>14</td>
</tr>
<tr>
<td>Conscientisation</td>
<td>14</td>
</tr>
<tr>
<td>Digitized Web-Based Economy</td>
<td>15</td>
</tr>
<tr>
<td>Habitus</td>
<td>15</td>
</tr>
<tr>
<td>Institutional Agent</td>
<td>15</td>
</tr>
<tr>
<td>Praxis</td>
<td>15</td>
</tr>
<tr>
<td>Project-Based Learning</td>
<td>15</td>
</tr>
<tr>
<td>Scaffolding</td>
<td>16</td>
</tr>
<tr>
<td>Social Capital</td>
<td>16</td>
</tr>
<tr>
<td>Digital Literacies</td>
<td>17</td>
</tr>
<tr>
<td>Multiliteracies</td>
<td>17</td>
</tr>
<tr>
<td>Purpose and Research Questions</td>
<td>17</td>
</tr>
<tr>
<td>Importance of the Study</td>
<td>20</td>
</tr>
<tr>
<td>Organization of the Dissertation</td>
<td>23</td>
</tr>
<tr>
<td><strong>Chapter Two: Review of the Literature</strong></td>
<td>26</td>
</tr>
</tbody>
</table>
Chapter Three: Methodology

Epistemological and Ontological Framework

Methodological Framework

Videoethnography

Procedures
Chapter Four: Analysis and Findings

Background

Analysis

The DERT Project Launch

Stage Play Group

Music Video Group

Findings

A staged process
Abstract

The 2009 High School Survey of Student Engagement from the USA revealed that 66 percent of students were bored at least once every day (Yazzie-Mintz, 2010). Similarly in Canada, more than 60 percent of high school students reported being intellectually disengaged (Willms, Friesen, & Milton, 2009). When students feel disengaged, the loss of potential and resources has ripple effects that last a lifetime for the individual and the community. While working as an educator in non-formal education in international settings, I observed that students were more engaged with hands-on project based learning than with traditional reading and writing classes. Personal experiences with my daughter and experiences at the workplace enabled me to realize the importance of students’ stakeholdership and agentic engagement in their learning. This study was inspired by those experiences and a multiliteracies project initiated by the Digital Economy Research Team (DERT), and focussed on high school students’ agentic engagement within project based learning.

Agentic engagement is an emergent dimension of learning, characterised by volition, perseverance, collaboration, risk taking, and initiative. Besides sharing these characteristics, agentic engagement is also positively correlated with cognitive, behavioural, and affective engagement (Reeve & Tseng, 2011). Building on an earlier definition that understood students’ agentic engagement as students’ contribution to the flow of information they receive (Reeve & Tseng, 2011), a more comprehensive definition is forwarded in this study; students’ critical and constructive contribution to their own and peer learning. Following from that definition, students’ agentic engagement is presented as a staged process comprising a recipient stage, a partnership stage, and an ownership stage. Students’ agentic engagement, much like reflective practice and praxis, is a simple yet complex concept. Its
simplicity lies in the premise that learning is a social process, and its complexity stems from the multiplicity of theoretical and practical implications regarding curricular designs and pedagogical strategies. Understanding students’ agentic engagement offers possibilities rather than prescriptions and advances students’ investment in and ownership of their learning.

Students’ agentic engagement prepares them for life after school, for higher education, and for successful participation in the digitized knowledge-application economy. It also contributes to increasing in-school retention, graduation rates, and learning outcomes. Agentic engagement fosters holistic development in students, and realization of their full potential. On the other hand, disengagement, and its corollary of students dropping out of school, results in massive loss to both the individual concerned and the community.

The data set for this study is part of a multi-stakeholder project initiated by DERT spanning two high schools and three community college sites in Prince Edward Island (PEI). As a research assistant in DERT, I was privileged to undertake the process of collecting data in two grade ten classes in one high school. Later, I was permitted by Dr. S. Wiebe, the DERT principal investigator, and Dr. R. MacDonald, a co-investigator, who are also my Ph.D. supervisors, to use the data I had collected for this study. Under DERT, students followed a project-based multiliteracies curriculum in the inquiry unit of an English Language Arts class. Students were guided through a semester long process by professional artists enlisted with Culture PEI, which is a non-profit culture sector organization in PEI. The artists, who were referred to as mentors in this project, worked along with the English Language Arts teacher to facilitate students’ creation of projects in a wide variety of genres, including a stage play, a music video, a stop-motion animation, a puppet show, and a children’s book. In total a little over 51 hours of video recording was gathered from ten groups of students and their five mentors. Following purposeful inclusion criteria, two
groups of students working with their two mentors were selected for this study. Through videoethnography I explored how students expressed agentic engagement, the variabilities that influenced their agentic engagement, and how pedagogical factors influenced students’ agentic engagement within project-based learning (PBL).

Videoethnography provided a framework to study social reality, and allowed for interpretation, analysis, and findings to be drawn from the intrinsic context (Goldman, Pea, Barron, & Denny, 2014; Knoblauch, Tuma, & Schnettler, 2015). Through videoethnography this study offered a holistic way to understand and assess students’ agentic engagement that is different from the dominant yet reductionist quantitative measures, such as time on task. Findings were distilled by drawing out critical stop moments (Fels, 2010, 2016). These stop moments were opportunities to pause and reflect (Vettraino & Linds, 2012). Findings from this study include the following: students’ agentic engagement is a fluid and dynamic multidirectional continuum that is comprised of sub stages; students’ habitus and social capital, field, nature of task, agentic engagement of peers, and teacher agency are variables that may influence students’ agentic engagement; scaffolding of students within their zone of proximal development enhances their agentic engagement; and project-based learning encourages students’ agentic engagement. This study also showed that seemingly reticent and withdrawn students are capable of involving themselves at the partnership and ownership stages of agentic engagement when their social capital and fund of knowledge are leveraged. Further, students’ agentic engagement can be expressed independent of human, technological and infrastructural resource availability and arrangements within the school.

Viewing students as agentically engaged participants enables them to gain multiliteracies valued in the present increasingly networked and digitized knowledge application economy. In summary, I highlight what students can achieve when they are agentically engaged, and I invite the reader to reimagine pedagogy and foster agentic
engagement among all students every day, in every classroom and school.
Chapter One: Introduction

Rationale

Young people are expected to be ‘conscientized glocal netizens’ (CGNs) in the present digitized knowledge-application economy, and preparing future-ready students is an important educational goal. Netizens, a term coined by Michael Hauben in 1993 refers to actively contributing citizens of the net enabled world (Blank, 2012; Hauben & Hauben, 1997) and the term ‘conscientized glocal netizens’ refers to critically aware citizens of the digitized and web-based world who think globally and act locally. A digitized and web-enabled economy is fueling rapid advances in every sector, leading to more effective and efficient designs, products, and services across the globe. This ever-advancing economy calls for constantly adaptive skills and individuals capable of working collaboratively and applying knowledge and skills across varied settings. As such, possession of content-specific knowledge alone will not suffice. Current demands challenge schools to respond by ‘enskilling’ young adults beyond subject-specific knowledge, to acquire the often talked about 21st-century skills of collaboration, communication, innovation, critical thinking, and problem solving, and develop multiliteracies and fluencies (Crockett, Jukes, & Churches, 2011; Gouzouasis, 2005).

The wide array of knowledge and skills and the ability to apply them necessitates a high degree of student engagement, particularly at the high school level. Engagement is the focus of this study for several reasons. Some relate to enhanced learning and related aspects such as deeper learning, enhanced motivation and self-directed learning, and learning outcomes. Others relate to preparing grade ten students for life after school, higher education, and successful participation in the digitized knowledge-application economy. Additional reasons pertain to increasing in-school retention, and increasing graduation rates, and increasing learning outcomes. Yet other reasons include students’ holistic development, and realization
of their full potential. For all those reasons and more, enhancing student engagement and student agency in education are imperative and need to be consciously promoted in school.

Schools are considered as spaces where students engage in meaningful interactions with peer and teachers to gain knowledge, learn skills, create new possibilities for themselves and others, and realize their paths to fulfilled successful lives. Lack of possibilities for authentic student participation and engagement, on the other hand, impedes learning and possibilities of optimal achievement both in school and beyond school. Reduced opportunities for meaningful participation in the learning process often leads to disengagement and has often been associated with students either dropping out of school or mechanically continuing in school. Student disengagement goes against the very purpose of education and leads to losses at various levels—individuals, families, communities, and nations. Studies around student engagement from Canada and the USA (Bridgeland, Dilulio, & Morison, 2006; D. J. Shernoff, Csikszentmihalyi, Schneider, & E. S. Shernoff, 2003; Willms, 2003) report that students’ dropping out of school was a gradual natural consequence, beginning with students feeling disengaged from school for a variety of reasons. On the international arena, in 2002, Canada fared well among 25 Organisation for Economic Co-operation and Development (OECD) countries with a dropout rate of 10.9 percent and was placed below the United Kingdom (UK) with an eight percent dropout rate, and above the United States of America (USA) with a dropout rate of 12.3 percent, Germany with 14.2 percent, France with 14.5 percent, and Italy with a dropout rate of 26.6 percent (Employment and Social Development Canada, 2015). Within Canada in general, and Prince Edward Island in particular, there has been a consistent decline in the high school dropout rate since the academic year 1990–1991. Statistics Canada (2010) reported that the high school dropout rate in Canada has halved in the period between 1990–1991 and 2009–2010 from 16.6 percent to 8.5 percent and reached still lower to 7.8 percent in 2011–2012 (Employment and Social Development Canada,
2015). According to this report, the high school dropout rate in PEI showed a similar decline from 18.9 percent in the years 1990–1993 to 8.9 percent during 2007–2010. While the steep reduction in dropout rates sounds encouraging, the figures represent 20–24 year olds without a high school diploma and not enrolled in school. Further, the actual numbers and individual lives represented by the percentages calls for concern. The implications in terms of individual lives and communities affected in the immediate and long term are significant. The social and economic costs to both the individuals and society at large due to students either dropping out or feeling forced out of school is enormous. The calculable loss in terms of unemployment; underemployment; enhanced health care costs primarily related to drugs, alcohol and poor lifestyle choices; increased social security costs, and heightened incarceration related costs add up to burden individuals and the society (Hankivsky, 2008; Henry, Knight, & Thornberry, 2011). Hankivsky (2008) presented in monetary terms the social cost of students’ dropping out of high school and the potential saving if there were even a small increase in the high school graduation rate. On the basis of available figures concerning non-completion of high school in 2008, Hankivsky reported an estimated aggregate loss of approximately $948.569 billion (over individuals’ lifetimes), and an aggregate potential saving of approximately $106.986 billion (over individuals’ lifetimes) with even one percentage increase in high school graduation. Added to the number of students who have dropped out of school is the unknown yet real number of students who attend school ritualistically and are disengaged from active learning. Loss accruing to the individual and consequently to society as a result of students feeling disengaged yet remaining in school is real though more difficult to quantify (Hankivsky, 2008). This loss to both individuals and society due to students being physically present in class, yet not being fully engaged in their learning in terms of unrealized human potential, time, and resources is equally if not more significant.
Disengagement from school is not a recent phenomenon as pointed out by Kincheloe (1985) and others such as Strong, Silver and Robinson, (1995). According to Freire (1973a,b) students experience alienation from what is being taught; they feel like objects in the learning process that need to be acted upon, and such experiences and feelings can result in disengagement from the learning process. Many students who feel disengaged “suffer in silence” (Willms, 2003, p. 56) while others express disengagement by withdrawing from school-based activities or by participating robotically, and still others mask disengagement by hanging out with friends (Shernoff et al., 2003). Engagement of students is considered as a precursor to successful graduation from school. For enhancing students’ engagement, educators such as Dewey (1961) and Kincheloe (2005), among others, have stressed the importance of students being able to experience school in relation to their everyday lives. Activities in school need to reflect lived realities of students’ everyday lives so that they can relate to what they are learning. Allowing educational activities in-school to mirror out-of-school social activities can broaden the learning palate and enhance the relevance of what is being learned. Viewing school as an extended part of students’ social world enables students to bring their natural curiosity to school and heightens their intrinsic motivation in the learning process. When such learning is student-directed and student-paced, students tend to stay engaged in their learning process.

**Background**

Inquiry-based pedagogical strategies such as project-based learning enmesh students’ natural curiosity with authentic and active learning. These inquiry-based pedagogical strategies have been gaining popularity for the allowances they offer for greater student engagement. Building on the understanding that learning is mediated through collective collaborative inquiry of the student with the teacher, and among students, the Digital Economy Research Team (DERT) project initiated an innovative curriculum for high school.
The present dissertation emerged from that larger visionary project initiated by the DERT project, which was a multi-stakeholder, multi-site project promoting digital and multiliteracies through a threshold concepts’ heuristic within project-based learning (PBL) in two high schools and three community college sites in Prince Edward Island (PEI). Headed by Dr. Sean Wiebe as the principal investigator (PI), and Drs. Ron MacDonald, Martha Gabriel, Sandy McAuley, and Barbara Campbell, as co-investigators (co-PIs) at the University of Prince Edward Island, the DERT project envisaged an innovative curriculum to enhance students’ digital and multiliteracies while retaining traditional text-based skills to position students for success in their lives after graduation. The DERT project introduced a multiliteracies curricular innovation in lieu of a traditional text-dominated curriculum in the Inquiry unit of the English Writing 421 course in five grade 10 English language arts classes in PEI. Professional creative arts experts, referred to as cultural experts, within the DERT acted as mentors alongside the teachers within the classrooms. The terms cultural expert and mentor were used instead of alternate terms such as teacher and instructor as the kind of work being undertaken resembled facilitation and mentoring, rather than formal instruction delivery. Further, the term teacher is usually used to denote a person with formal training in the profession. Over a semester long period, the mentors facilitated a project-based way of gaining multiliteracies and guided students to create projects in a range of genres, including music video, short film, stage play, and stop-motion animation.

In 2013, when the DERT study was implemented, I was involved as a research assistant and handled process documentation in two grade ten classrooms in one of the high schools. My association with the DERT as a research assistant gave me the opportunity to pursue a long standing interest—understanding students’ learning processes and the dynamics involved in students’ engagement. I was fortunate to have the trust and permission of the P.I., my supervisor, Dr. Wiebe, to combine my role as a research assistant with my interest to
observe students’ engagement in their learning process. Observations in class kindled my interest and curiosity to learn more on factors influencing students’ engagement. One day three students involved in the DERT PBL walked into the classroom, chatting excitedly. Apparently, they were more than an hour early for their PBL related work in their English language arts class, and were gently reminded by their teacher to come back later. On another day, I observed a group of students from another class stroll in, and watch in amazement as students worked on their projects. “We envy you,” one of them said. “You are so lucky to be doing this in a writing class.” While I refrained from asking the students what they meant by “so lucky,” this remark set me thinking further on factors influencing students’ engagement.

Subsequent discussions with the Drs. Sean Wiebe and Ron MacDonald (my Ph.D. supervisors) led to this study. These discussions were around student engagement and pedagogical or mentoring strategies. My discussions were animated as I shared what I observed in class each week, largely centred around (1) students’ engagement with the tasks at hand, (2) the questions they posed to each other and their mentors, (3) their levels of enthusiasm and initiative, and (4) also their expressions of frustration, confusion, and inaction. These discussions were around group dynamics, and mentoring or pedagogical strategies. Sometimes, I would convey my observations through telephone meetings, and at other times via e-mail. For purpose of the present study, I was granted permission to access and use video data I was instrumental in gathering from two, grade 10 English language arts classes from one high school in PEI. Through videoethnography, I explored expressions of and factors influencing students’ agentic engagement, and pedagogical strategies influencing agentic engagement within project-based learning (PBL) in a high school setting.

Outside of DERT project time, when I was by myself, I would reflectively relate my observations in the two grade 10 classes, with the experiences of my daughter in her school,
my work in international contexts promoting PBL as a preferred pedagogical strategy for education, and my own experiences while I was in school. The present study was shaped by these reflections and past experiences. In particular, it was inspired by a personal experience many years ago. Nearly a decade prior, I was advised by my daughter’s well-meaning teacher that I need to pay more attention to my daughter’s rest time as she seemed sleepy and had been observed yawning in class a couple of times. I sat beside my daughter after some fun time together and gently asked her what the teacher might have meant. My daughter clarified to me that her yawns were merely her expression of boredom with what was happening in class at the time. She explained to me that her teacher’s fears about her possibly feeling sleep deprived were misplaced as she was actually expressing her feelings of disengagement. This incident led me, as a mother and a professional social worker, to explore pedagogical strategies for enhancing student engagement. My explorations revealed that my daughter was not alone in this experience of boredom and disengagement while at school. At the time I was overseeing project implementation with a not-for-profit organization and was able to promote hands-on inquiry-based learning in several education projects. Most of these projects implemented non-formal education, similar to the education imparted in community college settings, and some education projects followed the formal education system.

My daughter is not alone in her experiences. Disengagement and boredom in school is a worldwide phenomenon. The recent 2009 High School Survey of Student Engagement from the USA revealed that 49 percent of high school students surveyed were bored every day, and 66 percent were bored at least once every day (Yazzie-Mintz, 2010). That survey had recorded responses from more than 42,000 high school students from 103 schools, spanning 27 states in the USA, and since 2006 these surveys have seen similar results through responses gathered from more than 300,000 students. My daughter’s in-school experiences
were mirrored in the experiences of those students, as they were communicating the distance, alienation, and disconnect, they felt with some aspects of formal schooling.

As mentioned above, learnings drawn from my daughter’s experiences guided me to promote hands-on project-based learning within the non-formal education settings in which I was involved at the time. Students who participated in project-based learning in these non-formal education settings, especially students at The Hope Project, a not-for-profit organization in India where I served at the helm, expressed deeper connection with what they were learning and exhibited enhanced confidence in communicating and presenting their learning. Their informal feedback communicated to me during their Science Exhibitions, Learning Fairs, and my visits to their classes reflected what educators, such as Dewey (1961) and Kincheloe (1985, 2005) among others (English & Kitsantas, 2013; Kolb, 2014), promoted within formal school settings.

As a social worker working with individuals, families and communities, I discovered that overarching principles in the field of Education such as social justice, conscientisation, empowerment and holistic development find synchronicity with principles in the field of social work. In the realm of education, formal and non-formal education share common goals and differ primarily in structure and organization. The latter enjoys a greater focus on personalized learning and lacks the intensity derived from standardized testing. Student empowerment, and strengthening of personal agency are overarching goals in the field of Education. The field of social work upholds similar overarching principles (Ungar, Liebenberg, & Ikeda, 2014). Also, advancement of holistic development of individuals and building social capital find expressions in the fields of education and social work (Aspalter, 2014). Further, enabling individuals to realize their full potential and live fulfilled lives are other common goals within both education and social work. During my masters in social work (M.SW.) study in 1995–1997, I was inspired by the Brazilian philosopher and educator,
Paulo Freire (1973a,b), and his concepts—especially praxis, conscientisation, and empowerment. The research I undertook as part of that degree was strongly influenced by the concepts espoused by Freire. I examined praxis, conscientisation, and empowerment as factors influencing levels of participation of community people associated with a non-governmental not-for-profit organization (Bosco, 1997). The present dissertation builds on the concepts of conscientisation and empowerment employed in the research study I had undertaken in fulfillment of the requirements of my masters’ degree. While undertaking the present study, I have come to further appreciate the foundational concepts espoused by Freire and see how Freire was influenced by other educational theorists such as John Dewey. My professional and volunteer work experiences in the fields of social development and education were also founded on the concepts forwarded by Freire and these experiences serve to inform the present study.

Thus, the present study is founded on the understanding that education is more than accrual of information. Dewey, who is also known as the father of progressive education, wrote about education as being a preparation of students for life (1915, 1956). Similarly, other theorists promoted education as a liberating and empowering process (Bourdieu, 1990a; Freire, 1973a, b; Kincheloe, 2005). Those educational theorists advocated a dialogical involvement of teachers and students in unraveling problems and making sense of the world. The model they proposed was diametrically opposed to the traditional way of teaching. Yet traditionally and in the present day, formal education models often subscribe to transmission-oriented pedagogies where control supersedes student autonomy. Freire used the term “culture of silence” to describe education settings that upheld notions of education as solely an information transmission process (Freire, 1973b, p. 10). In such educational settings there is a subtle yet pervasive requirement of students to follow instructions in the guise of promoting disciplined engagement within the school and often students comply
mechanically, devoid of an understanding that engagement with the norms and regulations of schooling are different and less growth promotive than engagement with their learning. According to Cope and Kalantzis (2014), traditional models of education promote rote learning through a ‘pedagogy of transmission.’ Educational settings based on traditional models of education continue to be widespread and offer students pre-packaged information capsules to be consumed with little to no critical discernment on the part of students. The previously noted education theorists advocated for learning environments that avoid presentation and delivery of pre-packaged knowledge to students, and promoted social constructivist and critical pedagogies that enable students to learn how to learn, and promoted student-autonomy directed inquiry that is scaffolded by teachers.

**Definitions**

Some of the key terms used in this study are defined herein.

**Agentic Engagement**

In this study, the term (students’) agentic engagement is defined as, students’ critical and constructive contribution to their own and peer learning. Key criteria include their capacity to express volition, make choices, and to take action in a way that contributes to their own learning and the learning of their peers.

**Conscientisation**

Freire explained conscientisation as the process of gaining critical awareness of one’s social reality and taking action towards this desired change (Freire Institute, 2016). The process of conscientisation is a humanizing act in which dominant and oppressive tendencies are analyzed, hegemony is questioned, real needs are identified, resources are harnessed, skills are gained, and action is taken towards an intended change in social reality.
Digitized Web-Based Economy

An economy that predominantly relies on a range of digital and networked technologies enhanced with web-based applications for production, exchange, distribution and consumption of a wide range of goods and services across the globe.

Habitus

“The conditionings associated with a particular class of conditions of existence produce habitus,” according to Bourdieu (1990a, p. 53). Habitus can be understood as the sum total of socialization and is continually shaped throughout an individual’s life. As such, though internal to the student’s person, habitus is constantly shaped and re-shaped within school settings and thus schools are spaces for ongoing socialisation and habitus building.

Institutional Agent

Teachers are referred to as institutional agents as they hold primacy of influence on rules and practices within the classroom. According to Stanton-Salazar (2011) these institutional agents are persons within the social network of schools, and their role as an agent is manifested when they either transmit, or negotiate the transmission of resources that are held in high value within the institution and the social world of the students.

Praxis

According to Freire (1973b) praxis is "reflection and action directed at the structures to be transformed" (p. 120). Praxis can be understood as a cyclical process involving reflection and action. In this process, action is preceded by critical and reflective analysis of a situation.

Project-Based Learning

Project-Based learning is an inquiry-based “approach to classroom teaching and learning that is designed to engage students in investigation of authentic problems” (Blumenfeld et al., 2011, p. 369). The Buck Institute of Education’s (BIE) model for Project-Based Learning (PBL) is a way for students to learn content-specific knowledge and
problem-solving skills as they search for the answer to an authentic and meaningful question that has real world applicability and gain competencies needed for success in life after school—further education, work, and civic engagement (BIE, 2003, 2009; England & Kitsantas, 2013). Project-Based Learning promotes student engagement, authentic learning and long term retention through the pedagogical strategies that are employed.

**Scaffolding**

Scaffolding is the provision of temporary support to students by teachers to enable students to work autonomously towards completion of tasks within their Zones of Proximal Development (ZPD) and gain mastery of the skills involved. A natural process in learning is by mastering a new skill, beyond one’s current skill level. When curricular tasks are seen as near attainable with some effort, students need to be scaffolded to ensure they stay motivated (Biggs & Tang, 2011). When pedagogical strategies scaffold students to progress steadily towards acquisition of new skills, students are engaged and retain their engagement (Shernoff et al., 2003). Operating within students’ ZPD is meeting students where they are and understanding their habitus and social capital, along with helping them envision the kinds of habitus and capital that they need to have in order to achieve their goals. While scaffolding can vary in intensity depending on individual student needs, it creates space for students’ engagement and learning through activities that require higher order thinking skills analysing, critiquing, evaluating, and creating (Vermette, 2009).

**Social Capital**

Social capital can be understood as a non-financial asset that individuals possess as a result of social networks. This asset is by and large a social rather than a natural endowment and is gained through social inheritance and is transmitted rather unconsciously (Bourdieu & Passeron, 1977). Schools are spaces where social capital (similar to habitus) can be
negotiated, exchanged, and enhanced. Within schools groups of students working together on projects, cliques, and clubs can be understood as sharing social capital.

**Digital Literacies**

Digital literacies can be understood under the ambit of 21st century skills, along with learning to learn. Digital technologies are playing an increasingly important part in the realm of education and employment (Griffin & Care, 2015; Wheeler, Yeomans, & Wheeler, 2008). Rapid advances in digital technologies have ensured easy availability of information and exponentially increased the applicability of these technologies. Their ubiquitous nature renders digital literacy an essential component of education today.

**Multiliteracies**

Understanding multiliteracies would include a changing understanding of the nature of text, along with the existing broad repertoire of traditional and new communications technologies—including audio, visual, print, and multimedia. Multiliteracies are accentuated with the digital variable. By gaining multiliteracies, Ted McCain (2005) highlighted, students will gain transferability skills that will enable them to apply their knowledge of using technology to solve challenges in multiple fields. In the present knowledge-application age, 21st century skills discussed above, and digital literacies, along with learning to learn, as also leveraging skills, and transferability of skills are all important and can be understood under the ambit of 21st century skills.

**Purpose and Research Questions**

Agency is an innate and unique human quality. As humans, students are agentic beings. So are teachers and all individuals who form a part of the institution of education. The notion of agency has been a part of discourse related to education at least since the 1950s (Dewey, 1956). While agency has been widely acknowledged as an essential aspect of education, student engagement has been discussed majorly as comprising three dimensions—
cognitive, affective, and behavioural. Recently, a fourth dimension of engagement is being discussed—agentic engagement. According to Reeve and Tseng (2011) agentic engagement is “students’ constructive contribution into the flow of instruction they receive” (p. 258). While this definition promotes the idea that students have the capacity and hence the potential to be contributing stakeholders in the process of their learning, it embodies a unidirectional understanding of learning and renders a reductionist quality to the notion of agentic engagement. With the understanding that learning is a dynamic social process, which necessitates a stakeholdership and deep involvement of students in their learning, in this study, students’ agentic engagement has been defined as, students’ critical and constructive contribution to their own and peer learning. Viewed in this way, agentic engagement subsumes major aspects of the previous three dimensions of engagement. Embedded in students’ agentic engagement is their ability to express their voice to enhance their own and peer learning. When students are acknowledged and recognized for their ability to contribute, their sense of worth and motivation are enhanced. Further, there is deeper learning with greater stakeholdership and subsequent investment in the learning process. Given its import to students’ education and implications for success in life beyond school, the emergent concept of agentic engagement is the focus of this study. A more elaborate discussion on students’ agentic engagement and the other three dimensions of student engagement is presented in the next chapter.

Often students’ gregariousness and overt action is inaccurately ascribed to their expression of agency and agentic engagement. While this may not be entirely off the mark, this study differentiates between students being vocal and students expressing their voice. For example, students on the playground playing a game of soccer, may appear to be deeply engaged in the game, yet may not be agentically engaged if they are simply following their coach’s instructions and are passing the ball only to persons decided upon by the coach.
Similarly, in the classroom, students using the clicker to answer questions can be mistakenly understood as students’ agentic engagement if students were merely following their teacher’s directives to give responses when she/he asked for them. This study suggests that when students are merely following instructions and conforming with rules and norms, their sense of agency is minimal, if not dormant. Students’ sense of agency lies in a state of dormancy when practices in school mirror societal hegemony and symbolically keep students as passive objects. On the other hand, student autonomy oriented pedagogies tend to encourage students’ agentic engagement, and enhance their learning.

Based on those perspectives, the general purpose of my study is to better understand how high school students express agentic engagement in project-based learning. To closely examine that purpose, I designed are three specific research questions.

- How do grade ten students express agentic engagement within project-based learning?
- What are the variabilities that influence expression of grade ten students’ agentic engagement?
- How do modifiable environmental variabilities, such as pedagogical strategies, influence grade ten students’ agentic engagement within project-based learning?

Learning is a socioculturally mediated process that students and teachers undertake through the course of schooling. Learning necessitates students’ agentic engagement, and given that learning is a process, one can imagine students’ agentic engagement in their learning taking place in stages. The stages of students’ agentic engagement proposed in this study are the recipient stage, the partnership stage, and the ownership stage. Those stages have been termed strategically to reflect a sequential development of agentic volition on the part of students as they deepen and enhance their stakeholdership in their own and peer
learning. Terms used for stages of agentic engagement are based on a modified version of my masters’ degree thesis where the focus was on levels of people’s participation in their own and community’s social development (Bosco, 1997).

Expressions of students’ agentic engagement are the focus through the first research question. Students’ engagement has been studied both as a singular and as a multidimensional construct. Yet, studies on expressions of students’ agentic engagement within high school are rare. With the understanding of students’ agentic engagement being their critical and constructive contribution to their own and peer learning, it becomes important to understand the possible variables that influence it. Also in the socio-culturally mediated process of learning, there are multiple dialogic and non-dialogic interplays between teacher-student, student-student, and student-environment, and sometimes with all three together. The second research question aims at understanding the possible variables that influence students’ agentic engagement.

Arguably, the most significant adult in students’ everyday life in school is the teacher and pedagogical strategies adopted by teachers tend to be modifiable. Understanding how those modifiable pedagogical strategies influence students’ agentic engagement was the core of the third research question. In this study, the creative arts experts acted in lieu of the teacher and mentored students in small groups to complete projects. While they lacked formal pedagogical training, the mentoring strategies adopted by them with the students provided inferences on the influence of pedagogical strategies on students’ agentic engagement.

**Importance of the Study**

Students need a conscious nurturing out of silence to be able to participate fully, be able to contribute constructively and critically, in their education. Encouraging students to express their voices and ask critical questions of the subject matter and the purpose of
education are important pedagogical responsibilities. Kincheloe (1985) explained, “students who can understand that education is much more than inculcation of facts and ‘essential’ knowledge and who can question why the facts are taught in certain ways are certain to be more thoughtful students” (p. 48). Learning environments that hone students’ critical thinking capacities and provide space for their agentic expression facilitate the development of conscientised individuals. Also, agentic engagement subsumes aspects of the three other dimensions of engagement – cognitive, behavioural and affective. These characteristics position agentic engagement as the most important dimension of student engagement. Yet, the number of studies that have dealt with students’ agentic engagement are few.

While this study resonates with the three previous studies on students’ agentic engagement (Jamaludin & Osman, 2014; Reeve & Tseng, 2011; Van Lier, 2008), this study is a first on five aspects: to propose and assess students’ agentic engagement through a stage theory understanding; to assess students’ agentic engagement within project-based learning; to assess students’ agentic engagement through videoethnography drawn from naturally recorded students’ interactions; to explore modifiable environmental variabilities such as pedagogical strategies that influence students’ agentic engagement; and finally, to examine how the nature of projects and tasks can influence students’ agentic engagement. This study is also significant in the backdrop of demands for self-directed, lifelong learners who are capable of working as “glocal netizens” independently and collaboratively beyond high school, in institutions of higher education and the workplace.

While project-based learning has been gaining popularity as a pedagogical strategy over the past forty years, no study is available on the association of this learning strategy with students’ agentic engagement. Further, though there are several studies on project-based learning and student engagement, most of these studies focus on project-based learning in
higher education settings with only a limited number of studies pertaining to the kindergarten to grade 12 classrooms, and still fewer studies focusing on high school settings, in particular.

Being complex, dynamic, and multifactorial, agentic engagement does not lend itself to easy quantification and measurement. It is difficult to quantify and, therefore, to measure agentic engagement. For often what is easily quantifiable gets measured and unwittingly what is important gets measured less often. I present a methodology to observe and measure students’ agentic engagement in a qualitatively comprehensive way. In a small, yet significant way, through this research I attempt to contribute to the gap in understanding students’ agentic engagement and environmental variabilities influencing high school students’ agentic engagement.

Of the three previous studies on students’ agentic engagement, two studies (Jamaludin & Osman, 2014; Reeve & Tseng, 2011) measured students’ agentic engagement on the basis of student self-report on a seven and five item scale respectively, while the third study (Van Lier, 2008) attempted to forward a hierarchy of the expressions of students’ volition and thereby students’ agentic engagement in different classroom settings at different points of time. This study may be the first to promote a staged theory of understanding students’ agentic engagement, and to employ videoethnography to assess students’ agentic engagement through careful and repeated observation of students’ and mentors’ everyday interactions within a project-based learning environment.

Despite the growing realization of the importance of student engagement, benefits of project-based learning as a pedagogical strategy, and use of technology within it, research on these areas in high school settings are few. A recent happening further accentuates the importance of conducting the present study. The announcement by the provincial government to enhance availability of wi-fi and IT equipment in all high schools in PEI (McCarthy, 2015), increased the possibility of high school students undertaking projects of a
digital nature and stressed the need to better understand how students can agentically engage with available technologies to further their learning. Also important is the fact that in this study students’ agentic engagement is posited as enabling students in learning to learn, in independent and collaborative ways, thus preparing them for the world they will walk into after they graduate high school.

This study will be useful to a wide and varied audience, primarily comprising high school teachers, and others in the education and social development fraternity including, K-12 teachers, community college teachers, counselors, school administrators, policy makers, social workers, and community development workers. Primarily, this study will be of interest to in-service teachers as they endeavour to promote students’ agentic engagement in their classrooms. Also, as they plan pedagogical strategies to captivate and maintain students’ motivation and interest, involve students in activities requiring higher order thinking, and develop students’ digital and multiliteracies. Pre-service teachers will find in this study the possibility of what can be achieved with optimal scaffolding and an alternative to traditional methods of teaching. This study presents university administrators, teacher trainers, and instructors who play a role in designing teacher education programs a novel combination of social and learning theories—social constructivist, critical constructivist, and critical theory—and their integrated application in practice. For school administrators, this study suggests possibilities for continued professional development programs. For policy makers, this study provides insight into the kinds of decisions required to impact students’ agentic engagement and teachers’ professional training.

**Organization of the Dissertation**

In the first chapter I introduce the rationale of this study and provide a background, followed by a discussion of the importance of this study. I also present the general purpose and research questions. In Chapter Two, the theoretical underpinnings and a literature review
relevant to the research questions are presented. Predominantly, a critical theory approach has been adopted in this study. Freirian concepts of conscientisation and empowerment, and Bourdieuan concepts of habitus and social capital, combine with constructivist epistememes promoted by Dewey (1961) and Kincheloe (2005), among others, to enable a deeper understanding of students’ agentic engagement and pedagogical strategies. The study’s theoretical richness is accentuated by Vygotsky’s (1968) concept of the Zone of Proximal Development that promotes adequate scaffolding strategically directed towards student autonomy. These student-autonomy oriented pedagogical strategies find prominence in understanding pedagogical strategies effective for promoting students’ agentic engagement. I posit that students’ agentic engagement is a staged process. The term ‘stage’ has been used deliberately (instead of the term ‘level’) to denote a more or less horizontal developmental process where teachers can scaffold student’s progress along a continuum – from the recipient stage and the partnership stage, to the ownership stage of agentic engagement. Though few, all published studies on students’ agentic engagement available in print and online are discussed in that chapter.

Chapter Three presents the Methodology for the present study. I adopted videoethnography within two purposefully drawn case studies. The two case studies were two groups of students with their mentors purposefully drawn from a population of eleven groups of students working with their mentors. Data collection methods, sampling method, and methods used for data analysis are also enumerated in the third chapter.

Chapter Four provides the analysis and findings from the two groups of students and their mentors spanning a semester, working together on a stage play and a music video. Chapter Five presents a summary of the major findings, and implications of those findings. A synthesis of the current policies and practices that serve to challenge and promote
opportunities are made visible in this study. Recommendations for practice and further research are presented towards the end.
Chapter Two: Review of the Literature

Introduction

This chapter presents a review of the literature to understand (1) influencers of educational outcomes; (2) digital and multiliteracies; (3) student engagement in general and students’ agentic engagement in particular; (4) pedagogical strategies that tend to promote students’ agentic engagement; and (5) the theoretical framework that guided this study. In the section on influencers of educational outcomes, factors influencing students’ educational achievements at the individual, institutional, and social realms are provided. In the next section, digital and multiliteracies valued in the present time are discussed. In the subsequent section on student engagement, I examine the different dimensions of engagement, and how those dimensions are associated. The emergent dimension of agentic engagement is discussed next along with its correlation with the other dimensions of student engagement and a new and more comprehensive definition of agentic engagement is offered. Following that is the presentation of a staged model of students’ agentic engagement. In the section that ensues, inquiry-based pedagogical strategies such as project-based and problem-based learning, are discussed in terms of the affordances those strategies provide to students’ agentic engagement. Use of scaffolding, particularly within students’ zones of proximal development, is followed by a discussion on higher order thinking, funds of knowledge, and design thinking as pedagogical strategies that promote students’ agentic engagement. Towards the end of this chapter is a discourse on the theoretical frameworks that guided this study, namely critical theory, social constructivism, and critical constructivism. The main concepts highlighted in the interrelation of those three theoretical frameworks include learning through experience, conscientisation, empowerment, habitus, social capital, zone of proximal development, and scaffolding.
Influencers of Educational Outcomes

A major educational goal is the preparation of students to be active participants and designers of their futures (Anstey & Bull, 2006). With the rapidly changing educational landscape, this educational goal can be regarded as preparing students to become glocal netizens who apply knowledge and skills across a range of disciplines and fields. As such, institutional agents or teachers are charged with enhancing students’ digital and multiliteracies along with content-based knowledge and the skills and competencies valued in the present century. These expected educational outcomes gain greater significance in the light of high student dropout rates, and high student disengagement rates, especially at the high school level.

There are multiple factors that influence a student’s educational outcome. Most commonly, a student’s educational trajectory is understood as being influenced by family background, specifically, socio-economic, educational, and employment-related background. Knowledge is contextual, and as advocated by Piaget, knowledge (unlike information) cannot be transferred as a tangible, portable, and immutable product (Kafai & Resnick, 2011). To possess a deeper understanding, students need to relate with and gain depth in connection with that which is sought to be understood (Kafai & Resnick, 2011). Thus, learning, its outcomes, and to some extent a student’s educational trajectory, are contextual and are dependent on social processes that take place in students’ environments—external and internal—including cognitive processes that take place within students’ minds. And being social in nature, students’ engagement in the process of their learning is paramount.

A diagrammatic representation of determinants of educational outcomes is provided below (see Figure 1).
At the individual level, both student-based characteristics and instructor-based characteristics influence students’ engagement and their educational outcomes in educational settings. Individual factors include students’ habitus, and social capital. Those factors complement other (social) determinants of educational outcomes. Among instructor-based factors, pedagogical stance has been noted as an important factor affecting students’ educational outcomes (Ertmer, Ottenbreit-Leftwich, Sadik, Sendurur, & Sendurur, 2012). Teachers being institutional agents also influence educational outcomes at the school and educational system level. Further, the school is acted upon by other social systems, and national and global practices and policies.

Among the individual factors that influence student engagement and educational outcomes, this paper focuses on habitus and social capital. The concepts of habitus and social capital are discussed in some detail under the section on theoretical frameworks. Here it may suffice to say that habitus can be understood as the sum total of socialization and is continually shaped throughout the life of an individual. As school is where students spend...
most of their time during the day, habitus is influenced by experiences within school settings. In the social process of learning, new understanding is built on selective interpretation of prior experiences, and internal dispositions (Goldman, Black, Maxwell, Plass, & Keitges, 2013). Those internal dispositions are also shaped by experiences and are referred to as habitus.

Social capital can be understood as a non-financial asset that individuals possess as a result of social networks, skills, and educational accomplishments. This asset is by and large gained through social inheritance and is transmitted rather unconsciously. Since social capital may be passed on as an inheritance, Bourdieu and Passeron (1977) argued that it is not a natural endowment, but rather it is a reflection of privilege. According to Bourdieu, social capital is “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition” (1985, p. 248). Social capital is accrued through social investment and identified by values and beliefs that are shared through interactions among individuals of a group. As such, social capital is an intangible social asset that can be built upon and traded for other capital, such as cultural capital and economic capital. Social capital can also be used to enhance social skills. According to Patuelli, Van Leeuvan, and Zirulia (2014), there is a direct relationship between social capital and social skills such as cooperation, i.e., the higher the social capital, the higher the proclivity or predisposition to cooperate.

The present knowledge-application economy calls for teachers to be enablers of learning, and contributors to students’ habitus and social capital development. Teachers occupy positions of authority and are endowed with social capital, which in turn influences students’ gain of social capital from school (Stanton-Salazar, 2011). More on the role of teachers in enabling educational outcomes is provided in the section on pedagogical strategies that influence student engagement.
At the next level is the institution or the school. Schools have a responsibility to create learning environments where teachers help their students understand “how meaning emerges collectively and collaboratively in the new media environment and how creativity operates differently in an open-source culture based on sampling, appropriation, transformation, and repurposing” (Ajayi, 2013, p. 181). For students, the school is largely their educational universe. Within this educational universe, students’ habitus and social capital are influenced by their interactions with teachers and peers. The curriculum, course requirements, assignments, teaching-learning strategy, and extra-curricular activities all contribute to development of students’ habitus and social capital. Authentic learning environments that foster inquiry, critical thinking, problem-solving, communication, and creation of real-world relevant artifacts will provide engagement opportunities for habitus development that are in sync with academic and workplace requirements. Engagement in an open environment where students feel free to share personal perspectives encourages critical discourses and enables deeper meaning seeking.

Schools, teachers, and students too, are influenced by macro level policies. Factors such as educational policies, assessment related policies, and policies pertaining to curriculum, personnel, staffing, infrastructure, equipment and technology also influence at the macro level. Other policies stipulating student-teacher ratios, the literacies, and skills and knowledge, influence practices that are privileged and promoted. Those macro level policies and practices impinge on the institutional and individual level factors.

**Digital Literacy and Multiliteracies**

Knowledge is available in abundance and more than the possession of knowledge, its application, across different sectors gains significance in the present economy, which can be understood as a knowledge-application economy. It follows then that besides subject specific or content-based knowledge, students are required to have 21st century skills that allow them
to think critically, collaborate, communicate, negotiate, problem-solve, and create (Griffin & Care, 2015; Hargreaves & Shirley, 2009; Wright & Davis, 2014). Given the increasing extent of digitization in the present economy, digital literacies have been added to the list of literacies important for the present time (Tompkins, Campbell, Green, & Smith, 2014).

According to Anstey and Bull (2006), the concept of multiliteracies encompasses all the dimensions of literacy and further includes technological, socio-cultural and global dimensions. Thus, a multiliteracies framework would include a changing understanding of the nature of text, along with the existing broad repertoire of traditional and new communication technologies, including audio, visual, print, and multimedia. Having digital literacy and being techno-savvy are essential 21st century literacy skills that promote multiliteracies and enable success in the digital technology infused world: entailing skills to read data, collect and collate relevant information, conduct research, apply data and knowledge from one field to another, and create new products or innovate to meet either immediate or forecasted needs. Hence, while information and knowledge continue to be important, it is the application of knowledge to varied scenarios both existing and anticipated, that is the key to success in the present economy. Application of knowledge in different settings can be learned through deep learning fostered by students’ agentic engagement. With this in mind, the larger project initiated by the DERT Team envisioned and implemented an innovative multiliteracies curriculum in two high schools and three community college sites in Prince Edward Island. As mentioned earlier, this Ph.D. study draws from a data subset of the larger DERT project.

In promoting multiliteracies, Ertmer et al. (2012) argued for technology to be used as a collaborative tool and for activities to be realistic, challenging, and multidisciplinary. In doing so, as Ted McCain (2005) highlighted, students will gain transferable skills that will enable them to apply their knowledge of using technology to solve challenges in multiple
fields. In the present knowledge-application age, 21st century skills discussed above, and digital literacies, along with learning to learn, as also leveraging skills, and transferability of skills are all important and can be understood under the ambit of 21st century skills.

Leveraging digital literacies and other 21st century skills was modeled in a couple of high schools by the DERT Team in collaboration with five high school teachers and ten mentors. Keeping in mind the need for 21st century skills, educators have been promoting student-centred learning while also cautioning against two common misconceptions related to student-centred learning: one, access to digital technologies does not necessarily result in enhanced student-centred learning; and two, teachers’ espoused beliefs regarding constructivist epistemologies also does not readily get converted to student-centred or student directed learning outcomes (Ertmer et al., 2012). Petko’s (2012) study had similar findings. However, there are challenges to this seemingly simple and timely proposal of enabling all high schools in PEI with digital and web-based technologies. The basis for these challenges arises from the ever-growing advancements in digital technologies and their increasing applications contrasted by the relatively sparse integration within schools (Ajayi, 2013).

**Integration of digital technologies in schools**

Digital technologies play an increasingly important part in the realm of education and employment (Griffin & Care, 2015; Wheeler, Yeomans, & Wheeler, 2008). Rapid advances in digital technologies have ensured easy availability of information and exponentially increased the applicability of these technologies. Ubiquitous digital technologies propel rapid, multifaceted, and multi-sector applications of knowledge in every sector including education. According to Dede (2011), learning opportunities afforded by ever increasing digital media will only increase. Their ubiquity renders digital literacy an essential component of education today.
While access to technology in school is widely accepted, discourses related to use of technology in school, often get sidetracked into techno-centric arguments, focussing more on the newness of the technology, and less on possible applications, especially in terms of using technologies available for students to interact and work with. Before embarking on a discussion of how students engage with digital technologies, and how teachers facilitate constructivist learning through use of digital technologies, it will be important to consider the historical developments along the digital road in K-12 educational contexts.

The past three decades have brought phenomenal advances in digital technologies in almost every sphere of life (Veletsianos & Kimmons, 2012). During this time period, concerted efforts were taken to equip schools with computers and digital technologies such as smart boards (Ertmer et al., 2012). Particularly in the last decade, heightened endeavours were made by schools to ensure the availability of digital technologies within their premises. In the USA, 100 percent schools have been equipped with computers, and an efficient student-computer ratio of 1.7 has been established (Ertmer et al., 2012). Similar efforts have been made in Canada, and the student-computer/digital device ratio has been brought down in many schools (Sclater, Sicoly, Abrami, & Wade, 2006) largely by equipping computer labs and by permitting students to bring their own digital devices to school.

By the late 1990s, when most schools were equipped with digital devices, attention shifted from access to effective use of the digital devices. Attention was also shifted to the factors at the individual and institutional level that affected student engagement with and learning through digital technologies. These factors included teachers’ confidence, beliefs, and their perceptions of digital technologies’ usefulness for student learning. These factors were considered important especially as they were intrinsic and posed a greater challenge to integration of digital technologies in teaching/learning strategies (Ertmer et al., 2012).

Ajayi’s (2013) study of 62 junior/senior high school ELA teachers from California found
most teachers were aware of the benefits of technology infused education, but were unable to use it within their classrooms for a number of reasons. This corroborated an earlier study in the United States, where Labbo (2006) reported that only a few schools had effectively integrated digital technologies in the curriculum. Thus, while most schools had equipped schools with computers connected to the internet, and to each other, these devices did not support the kinds of digital technology integration both teachers and students may have planned and desired to work with. Development of essential 21st-century skills among students will require more than availability of digital technologies.

There exists a digital divide and possible resultant marginalization among institutional agents (teachers), and more specifically among students, resulting from differences in knowledge of, access to, and use of digital technologies. The digital divide is present in all strata of the educational system, especially among teachers and students. Most young natives of the digital era find themselves in the midst of technology and use it in their social lives. However, availability of technology within school settings does not mirror availability of technology in students’ outside of school reality. Further, students’ skills in the use of media, especially social media in their personal lives, is not reflected in students’ skills with use of technology across all academic contexts. According to a Kaiser Family Foundation study (Rideout, Foehr, & Roberts, 2010, p. 23) 64% of young people aged 8-18 years reported using a computer for recreational purposes compared to 33% who used it for school-related purposes. Differences in skill level and extent of technology use by students, within and outside of school, is in part due to weak understanding of digital technologies’ applicability and interconnectivity in social day-to-day use and digital technologies’ academic use. Other reasons for the varied usage of digital technologies can be categorised as individual and institution related. Integration of digital technologies in schools is influenced by individual and institutional level factors. Separating the factors into two categories, individual and
institutional, serves to better understand the factors and does not imply rigid compartmentalisation. The two categories overlap and have synchronised spaces that contribute to maximum dynamism. An example of the overlap can be understood in the dual role of teachers both as individuals and as institutional agents. A brief overview of the individual and institution related factors are presented below.

**Individual level factors**

Individual level factors include factors associated with teachers and students. Among teachers, the beliefs and perceptions of the usefulness of digital technologies for student learning, skill level and competencies with digital technologies, confidence level, and pedagogical strategies are important factors. Ertmer and colleagues (2012) contend that teachers’ integration of digital technologies in teaching/learning is influenced more by their beliefs than factors such as students’ needs and school cultures. Lai and Chen (2011) reported that teachers who innovated or were digitally active were more inclined to promote use of digital technologies in their classrooms. The most important teacher-related factor cited in a number of studies pertained to the pedagogical beliefs of teachers (Ajayi, 2013; Hutchison & Reinki, 2011; Lai & Chen 2011; Petko, 2012). Petko’s (2012) study of 357 junior high teachers in Switzerland confirmed positive connections between constructivist pedagogy and integration of digital technologies within the classroom. Yet, he cautioned that espoused beliefs and actual practice may not be totally congruent as almost all teachers responded in the affirmative to questions around constructivist pedagogy.

Individual level factors concerning students’ use of and their success with digital technologies include: what students are expected to do, what they have access to use, and the kind of learning environment they are in. Students engage with digital technologies in school easily when curricular tasks are in the form of games and invite students to play. Watson, Mong, and Harris (2011) observed a significant increase in student engagement when
students were playing a video game. Access to use includes availability of the needed/desired technological device in terms of type of device, time for use, features available on the digital device, student-computer ratio or student-digital device ratio. Learning environments that require students to use digital technologies in ways that are familiar to students often result in greater use of digital technologies by students. Thus, students’ prior knowledge of use and applications can also influence their work with digital technologies. Contrarily, lack of access and lack of prior experience can be obstacles for students that in turn affects teachers’ integrating digital technologies in the curriculum. However, appropriate guidance can compensate for students’ lack of prior knowledge, and they can soon become involved with using the digital technologies.

**Institutional level factors**

There are global forces that influence institutional level factors. These global factors include international education and assessment of education related policies and practices, and market or business oriented forces pushing rather than promoting use of certain technologies within schools. As Leask and Pachler (2013) noted, introduction of digital technologies was more a fetish in beliefs of Information Communication Technologies (ICT’s) panaceal effects, and influence of market oriented lobby, than careful planning on its use within educational settings. Legitimate concerns have been raised around the push factors driven by business and corporate interests that promote certain types of technology within schools with little to no planning about the technology’s role in enhancing learning outcomes and fostering authentic student engagement and learning. Concerns have also been raised regarding clarity of institutional vision (Kopcha, 2012), pervasively understood expectations, and well-known incentives for teachers to integrate digital technologies in the classroom. Appropriate training of teachers is also seldom undertaken before installing digital technologies. Besides adequate and appropriate training and support of teachers to
effectively embed digital technologies into the curriculum, factors at the institutional level include availability of suitable technology, in functioning order, in all classrooms. According to Ajayi (2013), availability of appropriate infrastructure influences teachers’ ability to effectively integrate available digital technologies to enhance students’ learning experiences.

**Student Engagement**

Student engagement influences the quality of everyday lives, experiences, learning, and futures (Canadian Education Association [CEA], n.d.). Enhanced learning outcomes, and graduation rates are also associated with student engagement (Christenson, Reschly, & Wylie, 2012; Zepke & Leach, 2010). Still other desirable outcomes influenced by student engagement include deeper learning, transdisciplinary and multisectoral application of knowledge, positive attitude towards life-long learning, greater employability, and wider civic participation. Definitions of student engagement vary, however there is agreement that it is a multidimensional construct (Boekaerts, 2016; CEA, n.d.; Christenson et al., 2012).

Some scholars such as Appleton, Christenson, Kim, and Reschly (2006), considered student engagement as encompassing four subtypes: academic, cognitive, behavioral, and psychological. Other scholars such as S. A. Parsons, Nuland, and Parsons (2014) promoted student engagement as comprising the cognitive, behavioural, and affective dimensions. In keeping with this understanding, Li and Lerner (2013) defined student engagement as “behavioural participation, emotional attachment, and cognitive devotion” (p. 20).

**Behavioural engagement**

Behavioural engagement refers to students’ participation in activities that are school-based (Fredricks, Bloomberg, & Paris, 2004). Students who are behaviourally engaged would typically comply with school norms and classroom rules, such as attendance and homework completion, undertake academic tasks as required, and participate in school related work (Gibbs & Poskitt, 2010; Wang, Fredricks, Ye, Hofkens, & Linn, 2016).
Students’ action and conduct while in school, including their participation in extra-curricular activities also come under the ambit of behavioural engagement.

**Affective engagement**

The affective dimension of engagement, also known as emotional engagement, refers to feelings of belonging, involvement, attachment, and affiliation with the school and school environment (Christenson et al., 2012; Estell & Perdue, 2013; Parsons et al., 2014; Patrick, Allison, & Kaplan, 2007). Affective engagement also includes cohesion among students, rapport with teachers, perceptions of support, fairness, and mutual respect from teachers and students, and interest and enjoyment in school related activities. According to Christenson et al. (2012), affective engagement reflected students’ attitude towards school and school work, their perception of usefulness of school work, as well as their persistence, and intrinsic motivation.

**Cognitive engagement**

Cognitive engagement encompasses students’ “attention, participation, focus, and propensity to set goals beyond what is minimally expected” (Christenson et al., 2012, p. 345). This dimension of student engagement also includes students’ disciplined meta-cognitive, self-regulated, inquiry; investment in their learning; persistence; motivation; and perception of self-efficacy (Archambault, Janosz, Fallu, & Pagani, 2009; Christenson et al., 2012; Fredricks et al., 2004; Gibbs & Poskitt, 2010). According to Fredricks et al. (2004), cognitive engagement also comprised the goals and values students held with respect to learning.

**Agentic engagement**

Recent research offers a fourth dimension of student engagement; agentic engagement. This emergent dimension emphasizes students’ involvement in learning and is defined by Reeve and Tseng (2011) as “students’ constructive contribution into the flow of instruction
they receive” (p. 258). In this definition, Reeve and Tseng (2011) privilege students’ role and highlight students’ propensity to contribute positively towards their learning. However, the definition also appears reductionist through an understanding of learning as a unidirectional process where students’ role is limited to actively receiving information. Education theorists and educators have since at least the early 1950s (Dewey, 1915, 1956; Freire, 1973a, b) promoted the understanding of learning as a dynamic process necessitating students’ active involvement in knowledge creation as well as knowledge consumption. Through the work of Dewey and other education theorists presented later in this chapter, there is an appreciation that learning is more than receipt of information flowing in a linear path. The learning process is multidirectional, multidimensional, and dialectical involving action, reflection, experience, and abstraction (A. Y. Kolb & Kolb, 2012). In keeping with the above understanding of learning and recognising the necessity of students’ active agentic involvement in their learning, I have proposed the following definition of students’ agentic engagement: students’ critical and constructive contribution to their own and peer learning. Primarily, this definition privileges student will, volition, voice, and stakeholdership in their learning process. Secondly, this definition reflects the dynamic multidirectional and multidimensional process of learning. Further, this definition recognizes and highlights the intrinsically social nature of learning and stresses the importance of collaboration for furthering learning.

**Interrelationship Between Different Dimensions of Student Engagement**

All dimensions of student engagement are distinct yet are associated and interlinked with each other (Gibbs & Poskitt, 2010; Reeve & Tseng, 2011; Yonezawa, Jones, & Joselowsky, 2009) as represented in Figure 2. By encompassing and highlighting students’ will and volition, the agentic dimension of students’ engagement subsumes significant aspects of the other three dimensions of student engagement. In an overarching way,
students’ behavioural engagement, cognitive engagement, and affective engagement, need students’ will and volition to be enacted and be successfully expressed. Along with volition and will, attributes of agency such as motivation, perseverance, and effort also lend to the commonalities among students’ agentic engagement and the other three dimensions of engagement. According to Reeve and Tseng (2011), students who exhibit agentic engagement would express their opinion, offer a suggestion, and/or ask a question, during the course of classroom instruction and curricular work. Further, perception of self-efficacy linked with a sense of agency influences interest that is associated with cognitive engagement (Gibbs & Poskitt, 2010). Still further, other attributes of agentic engagement that find reflection in the behavioral, cognitive, and affective dimensions of student engagement include being present in class, paying attention, and expressing connectedness with co-students, teachers, and the school in general.

Not only is the distinct dimension of students’ agentic engagement associated interlinked with the other three dimensions of student engagement, there is also a statistically significant correlation between students’ agentic engagement and the other dimensions of student engagement (Reeve & Tseng, 2011). Through their study of 365 high school students, Reeve and Tseng (2011) explained that the emergent dimension of students’ agentic engagement is significantly and positively correlated with the other three dimensions of student engagement; behavioural engagement, $r(363) = .36, p < .01$; emotional engagement, $r(363) = .46, p < .01$; and cognitive engagement, $r(363) = .48, p < .01$ (p. 261). Further, through multiple regression the authors presented that the four dimensions of student engagement worked collectively, and significantly predicted students achievement, “$F(6, 358) = 36.29, p < .01, (R^2 = .38)$” (Reeve & Tseng, 2011, p. 261).

The inter-relatedness among the different dimensions of student engagement and the importance of student agency to students’ learning and staying in school, have prompted
studies to better understand environments that promote students’ access to decision-making, freedom to experiment take risks and initiative, and have their voices heard (Gibbs & Poskitt, 2010; Toshalis & Nakkula, 2012).

Figure 2. Interrelation between different dimensions of engagement.

**Stages of Agentic Engagement**

Since learning is a process, students’ agentic engagement in the process of learning can be understood as being comprised of stages—each stage building on the other through increments in students’ will, volition, and critical and constructive contribution to further their own and peer learning. With that understanding, students’ agentic engagement can be
visualized in terms of three stages; a recipient stage of agentic engagement, a partnership stage of agentic engagement, and an ownership stage of agentic engagement. In tandem with the socially mediated multidimensional process of learning, those stages of students’ agentic engagement too are dynamic and fluid with one stage following from the other through deeper and more social constructivist and critical thinking and action.

Figure 3. Stages of students’ agentic engagement.

**Recipient stage of students’ agentic engagement**

Within schools, teachers hold symbolic power (Bourdieu, 1979) and teachers are viewed as having knowledge, authority and power and who hence are in a “culture of domination” and where students are conditioned to submissive behaviour (Freire, 2011, p. 45). When students perceive their role in school as being passive recipients of knowledge, they are in a “culture of silence” (Freire, 1973b, p. 10). Students who are in this silenced mode of learning, depend almost entirely on unidirectional flow of information provided by more powerful adult institutional agents or teachers. Expressions of students’ agentic engagement require students to be confident with their sense of agency and in their capacity to exercise their agency to promote their own and peer learning.
Prior to being involved in agentic engagement, students are likely to be in what can be understood as the pre-agentic stage or recipient stage of agentic engagement. At the recipient stage of agentic engagement, students are yet to come into consciousness and realize their role in the learning process. Students at the pre-agentic or recipient stage of agentic engagement view themselves as passive objects capable of only receiving pre-packaged transmission of information and knowledge. While at this recipient stage of agentic engagement students uphold a traditional understanding of education, and their involvement is expressed through conformist behaviour and action. At this stage, students may be responsive, but are minimally invested, respond mechanically with little to no thought or reflection and simply carry out instructions. They believe that they are doing well in school if they are complying with their teachers’ instructions. Students at this initial stage termed pre-agentic or recipient stage of agentic engagement are unaware of their agency, and thereby their agency is invisible to them.

**Partnership stage of students’ agentic engagement**

At the partnership stage, students consider themselves as stakeholders in their education and feel they can collaboratively contribute to their learning. When students volunteer to answer questions and respond to teachers’ prompts, they can be understood to be involved at the partnership stage of agentic engagement. At the partnership stage of agentic engagement, students show enthusiasm in their role as contributors and co-learners with the teacher and peers, and can be observed seeking suggestions, and accepting assistance in an environment of co-learning. At this partnership stage of agentic engagement, students can be observed turning to their teacher or peer for additional or supplemental information and resources for their learning. Thus, when students go just beyond doing only what is required and are able to ask their teacher or a peer for support and help where needed, they are engaged at the partnership stage.
Ownership stage of students’ agentic engagement

When students feel empowered enough to take initiative, propose alternatives, pose critical questions, and provide suggestions, they are exhibiting agentic engagement at the ownership stage. Of course, the actions being taken by the student need to be in a direction that furthers their own and peer learning. At the ownership stage of engagement, students can be observed taking initiative, offering ideas, extending assistance and support, and knowing where to get support or find the resources they need to further their own and peer learning. At this stage, student self-determination is high and students are “causal agents” responsible for their learning (Wehmeyer, Palmer, Agran, Mithaug, & Martin, 2000, p. 439). Other examples of actions undertaken by students at this highest stage of agentic engagement include initiating a debate or a discussion, creating collaborative work, organizing group events, volunteering to peer-coach, assisting other learners and contributing towards collaborative learning, facilitating discussions or debates. Thus, at the ownership stage of agentic engagement students show critical awareness of their role in their learning process.

The Assessment of Agentic Engagement

Engagement is often assessed against a continuum of high to low, where high levels of engagement are denoted by active class participation, enthusiastic approach and positive attitude towards curricular activities, and low levels of engagement are exemplified by indifference and boredom towards school related work (Parsons et al., 2014). Assessment of engagement is often undertaken systematically through itemised Likert scale based surveys. Direct observation has also been used as an effective stand-alone method of assessing engagement and as a way of complementing data collected in a survey.

Reeve and Tseng (2011) used a five-item questionnaire to assess agentic engagement. This questionnaire was filled out by students and contained the following items.

● During class, I ask questions
That type of itemised questionnaire provides a general understanding and a rough assessment of agentic engagement. Given the stress placed on expressed opinions and stated questions, an itemised questionnaire could enable a researcher to assess agentic engagement as expressed verbally. However, other indicators of agentic engagement, or the lack of it, such as physical actions and behaviours, overt expressions, and silent dissent would be overlooked. Further, since it is a student self-reported questionnaire, only the expressed perspective of the students would be collected. In another study, building on the work of Reeve (2013), Jamaludin and Osman (2014) used a seven-item questionnaire to measure students’ agentic engagement.

The itemized questionnaires used in Reeve and Tseng’s (2011) and Jamaludin and Osman’s (2014) studies signify an understanding of learning as a linear transaction between the teacher and the student. Moreover, their studies discount peer involvement and dynamic interactions among students, and among students and teachers in the social process of learning.
Van Lier (2008) attempted to categorise students’ agentic engagement based on a hierarchical differentiation of the intensity of student volition based on his observations of students’ agentic engagement in different classroom settings at different points of time. His study contributed to an understanding that students’ agentic engagement can vary in intensity, however, the 2008 study failed to present any concrete way of assessing students’ agentic engagement. This study builds on Van Lier’s (2008) work around variation of students’ agentic engagement and presents a staged model to understand and assess students’ agentic engagement.

**Theoretical Framework**

Learning and students’ agentic engagement in learning are socially mediated and influenced by variabilities related to the person, pedagogy, and process. Some of these person related variabilities are habitus, social capital, funds of knowledge, and agency; pedagogy related variabilities include reflective inquiry, scaffolding, and design thinking; and process related concepts comprise conscientisation, democratisation, empowerment, and praxis. Through the concepts enumerated above, John Dewey, Paulo Freire, Pierre Bourdieu, Lev Vygotsky, and Joe Kincheloe among others (such as Navarro, 2006; Walther, 2014; Wiebe & Casely Smith, 2016) have guided this study.

For John Dewey (1956), a North American educator and philosopher, learning unlike information accrual was based on experience. He was known as the father of inquiry based learning as he stressed the importance of reflective inquiry (Palmer, 2001; Steel, 2014a, b). For Dewey (1938) students gained a deeper understanding of the reality and appreciated the contextual whole, with its interconnected parts through reflective inquiry. By 1916, Dewey was recognized as one of the greatest educational philosophers and his work has influenced educational scholarship for more than a century (Mintz, 2016). Notably, Dewey’s ideas on experiential learning and problem-posing, influenced the work of Paulo Freire, an educator
from Brazil, especially on praxis (Smith & Knapp, 2011). Dewey’s ideas of promoting a critically interrogative and reflective inquiry-based approach to learning also found resonance in Freire’s work (Lyons, 2010 as cited in Dimova & Kamarska, 2015). Further, Dewey’s idea of democratisation within the classroom was similar to Freire’s work on conscientisation and empowerment of learners (Freire, 1994).

Pierre Bourdieu, a philosopher and sociologist from France, forwarded the inter-linked concepts of habitus, capital and field (Grenfell, 2012; Susen & Turner, 2011; Walther, 2014) to explain students’ dispositions to learning. Like Freire, Bourdieu promoted expression of agency and moving away from hegemonic pulls within the classroom. Education, for Bourdieu as also for Dewey and Freire, was a liberative process that brought students out of the “theme of silence” (Freire, 1973b, p. 73). According to Bourdieu (1990a) learning was influenced by more practical internalized dispositions embedded in the habitus, and was influenced by social capital along with its interplay in a field, rather than the seemingly objective situation.

Lev Vygotsky, a psychologist from Russia pioneered work in developmental psychology including the concept of zone of proximal development (Cole, John-Steiner, Scribner, & Souberman, 1978; Kozulin, Gindis, Ageyev, & Miller, 2003). What Bourdieu called habitus, Vygotsky referred to as “internalized culture” that influenced a student’s learning (Blanck, 1990, p. 47). Vygotsky explained how learning can be enhanced through scaffolding by a more knowledgeable other (MKO) who is usually the teacher (McLeod, 2014). Among others, Vygotsky’s work influenced Joe L. Kincheloe who was a Canada Research Chair in Critical Pedagogy, and a co-founder of the Paulo and Nita Freire International Project for Critical Pedagogy (Willinsky, 2009). Kincheloe (2005) advanced a critical understanding of the forces that influence knowledge creation, how knowledge is inscribed and favoured, the values that are prevalent, whose interests knowledge serves, and
how it shapes identities. He built on Vygotsky’s contribution that individuals operate from a social-cultural-historical context (Malott, 2011). Kincheloe problematized the assumptions prevalent in existing knowledge and cautioned the reductionist risk of privileging singular points of view. For him an important purpose of education was to expand what we understand of the world and the development of minds and processes to “produce knowledge that can change the world” (Kincheloe, 2005, p. 142).

These theorists advanced a critical sociocultural perspective of learning that upheld the primacy of students’ stakeholdership and agentic engagement in their learning. The interlinkages among the theoretical concepts mentioned above are complex and multilayered and the figure below serves to visualise these connections in a simplified heuristic.

![Theoretical framework heuristic](Figure 4. Theoretical framework heuristic.)

**Person Related Theoretical Concepts**

**Habitus**

Habitus is a central concept in Bourdieu’s work that encapsulated a person’s
experiences of the world as deposited into an internal structure (Lester, 2011; Navarro, 2006). Habitus can be understood as a cognitive system of dispositions that formats our mind with perceptions, thoughts, and feelings (Walther, 2014). Habitus includes mental attitudes and perceptions but is also more than that (Reay, 2004). Habitus holds the characteristics of permeability and ability to capture continuity and change (Reay, 2004, p. 431). Habitus also incorporates mannerisms and actions that are a product of social conditioning (Hillier & Rooksby, 2005). According to Bourdieu (1990a), habitus is, “the conditionings associated with a particular class of conditions of existence produce habitus, systems of durable, transposable dispositions, structured structures predisposed to function as structuring structures…” (p. 53). Bourdieu explained the durability aspect of habitus as expressed in the ways of a person’s “standing, speaking, walking, and thereby of feeling and thinking” (1990a, p. 70). Bourdieu (1998) further explained habitus as an embodied, socialised and structured product of socialization –

…A socialised body. A structured body, a body which has incorporated the immanent structures of a world or of a particular sector of that world-a field-and which structures the perception of that world as well as action in that world. (p. 81)

That embodied, internal structure is invisible to the bearer, and they act without being consciously influenced by their habitus. Besides experiences, there is an unconscious assimilation of norms and practices that get embedded in the habitus as schemes that influence a person’s tendency to behave in a certain manner, and is a precursor to action (Lester, 2011; Simon & Bryan, 2011). There is a plurality of dispositions built over time that corresponds to the plurality of social contexts individuals have been exposed to (Susen & Turner, 2011). Habitus also allows the inculcation and expression of “creative capacity” and “competence” (Simon & Bryan, 2011, p. 252). As such, students’ habitus influences their ability to take risks, innovate, create and develop skills. Thus, in order to learn problem
solving, innovation, communication and other important life skills, students need to be exposed to situations where those skills are observable, or applicable. From being exposed to varied situations and with the opportunity to draw learning from the environment, students have opportunities to develop desirable 21st century skills.

**Social capital**

According to Bourdieu, social capital is “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition” (1985, p. 248). Those resources could be either “actual or virtual,” and could accrue to both “an individual and a group” (Bourdieu & Wacquant, 1992, p. 119). Members who share similar capital also share meaning and validity (Susen & Turner, 2011). That is to say members accept commonality in meaning of what is being said, and also assume as valid what is being said. Members of a social network or a social group who share social capital, also share acceptance, acknowledgement and recognition. Such a sense of acceptance, acknowledgement and recognition provides members a sense of security, surety and confidence, allows for risk taking, and promotes creativity. Within a classroom, social capital can be enhanced through democratisation and respectful dialogue (Hooks, 2015; Smith, 2002). Values of democracy and respect and actions arising from them, afford acceptance and acknowledgement of the validity of each person’s actual and potential contribution, and also encourage the expression of creativity and innovation. Another characteristic of social capital is that it is an intangible social asset that can be built upon and used to enhance other capital such as cultural capital and economic capital (Patuelli, Van Leeuven, & Zirulia, 2014). Thus, leveraging social capital can be a means of doing well in school, acquiring cultural capital, and getting suitable employment.
Funds of knowledge

Funds of knowledge is defined as “the historically accumulated and culturally developed bodies of knowledge and skills essential for ...individual functioning and well-being” (Moll, Amanti, Neff, & Gonzales, 2001, p. 133). The funds of knowledge can be understood as students’ tacit knowledge and skills accumulated over the years primarily through life experiences (Mcgrath & Gu, 2016). It includes knowledge accrued informally such as valuation of stocks and market performance, and skills such as use of mobile phones and digital calculators. That rich pool of knowledge and skills can be leveraged to build newer understanding, and gain more knowledge and skills. Learning is a socially-mediated process, and affordances for students’ agentic engagement and learning are influenced by students’ habitus, social capital, and students’ funds of knowledge. Students’ funds of knowledge serve as a reservoir of resources through which students’ engagement can be promoted and a foundation on which educational outcomes can be promoted. When teachers recognise and draw from students’ funds of knowledge, students are enabled to build on their present knowledge and understandings (Hedges, 2011).

Agency

Agency can be understood as the “disposition and capacity to act on the world in ways that involve self-direction” (Kincheloe, 2005, p. 59). With education being visualised as a precursor to a better world, promotion of agency has been enlisted as being essential in the pursuit of democratic and egalitarian principles (Dewey, 1956; Kincheloe, 2005). Human beings, wrote Kincheloe, held the “inalienable rights” to “knowledge production” and “empowerment” (Kincheloe, 2005, p. 59). Both teachers and students have the right to exercise human agency towards the production of knowledge. And along with rights come duties. By virtue of their position and role within schools, teachers can engage students in the “knowledge production process” where students are active participants in “analyzing,
interpreting and constructing a wide variety of knowledges emerging from diverse locations” (Kincheloe, 2005, p. 3).

**Pedagogy Related Theoretical Concepts**

**Reflective inquiry**

Being curious, reflective, and able to critique were important aspects of learning (Dewey, 1915, 1956). For Dewey, students gained a deeper understanding of the reality and appreciated the contextual whole, with its interconnected parts through reflective inquiry. The method of inquiry promoted by Dewey was a scientific method of learning that was not confined to the sciences, and was equally relevant within the arts. His book, *Logic: The Theory of Inquiry*, was devoted to the development of reflective inquiry based learning (Dewey, 1938). Reflective inquiry was closely tied in with experiential learning; he illustrated how “vivid use of language” proceeded from a “vivid experience” (Dewey, 1956, p. 57). Besides language development and use, reflective inquiry as promoted by Dewey provided affordances for problem-solving (Dimova & Kamarska, 2015). When reflective inquiry is promoted along with real-world problem solving, students are invited to communicatively engage with each other, develop their capacity for critical thinking, and undertake collaborative action (Saltmarsh, 2007). That mode of learning allows students to be wide-awake, active with attention, and open to a deepening of consciousness (Lyons, 2010), a state referred to as conscientisation from a Freirian viewpoint. When reflective inquiry is promoted along with real-world problem solving, students are invited to communicatively engage with each other, develop their capacity for critical thinking, and undertake collaborative action (Saltmarsh, 2007).

**Scaffolding**

Scaffolding is the temporary support and guidance a teacher, mentor, or a more knowledgeable other provides to assist with learning (Mason, 2012). Vygotsky (1978)
proposed scaffolding as a pedagogical tool to allow learners to maximise learning potential. Scaffolding can include demonstrating a task, modeling a skill, offering prompts, hints or cues, and adapting material or activity (Copple & Bredekamp, 2009; Silver, 2011). Different strategies such as demonstrating and modelling, presentation of exemplars, and breaking tasks into smaller doable bits are employed. Scaffolding serves as a support and as an inspiration about what is possible and can be offered with nearly all if not all activities, big and small depending on the student’s current competency and complexity of the activity. When students receive appropriate scaffolding they are positioned to achieve success in an activity they were previously unable to complete by themselves.

**Zone of proximal development**

Learning takes place when a person gains new knowledge, attains new skills, and is able to achieve a task that was previously unachievable, rather than when a person simply repeats a function or performs a task that they have performed or achieved at a previous instance (Kozulin, Gindis, Ageyev, & Miller, 2003). Optimal learning takes place within the zone of proximal development (ZPD), which is a space defined as “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (Vygotsky, 1978, p. 86). The ZPD is not a generic zone, but is task specific and so students can have multiple ZPDs pertaining to the subject and task at hand. For example, a student’s ZPD in science can be different from their ZPD in hockey. The ZPD is influenced by pedagogy and when instructional scaffolding is directed within students’ ZPD, students are positioned to learn more.

**Design thinking**

To be globally competitive glocal netizens, students need new multiliteracies that can be gained through design thinking pedagogy (Wiebe & Caseley Smith, 2016; Wrigley &
Strakler, 2015). Design thinking is a problem-solving approach to enhance creativity and innovation (Luka, 2014; Wiebe & Caseley Smith, 2016; Wrigley & Straker, 2015). Dewey’s ideas of reflective inquiry are mirrored in this contemporary theory of design thinking that promotes seeing the whole over separated isolated pieces of knowledge and encourages transference of knowledge across disciplinary realms. When a student-centred approach and design thinking are adopted students are presented space to try out new ideas, take risks, and create. Such a pedagogy nurtures their agentic engagement. In keeping with the lateral, creative and innovative thinking required to promote new multiliteracies the DERT presented a design thinking model (Wiebe & Casely Smith, 2016). This model invites students to enhance their intellectual and creative thinking and promotes application of knowledge and skills over multiple disciplines.
Design thinking promotes lateral and higher quality thinking that allows students to draw from their funds of knowledge and create new knowledge (Wiebe & Caseley Smith, 2016). When students undertake design thinking they are encouraged to move beyond subject specific confines and apply their learning in real life scenarios. In this way, design thinking enhances students’ agentic engagement and contributes to deeper learning.

**Process Related Theoretical Concepts**

**Conscientisation**

Reflective inquiry allows students to be wide-awake, active with attention, and open to a deepening of consciousness (Lyons, 2010), a state referred to as conscientisation from a Freirian viewpoint. Freire used the word conscientisation to denote critical awareness of the social, cultural, and political world (Curnow, 2013). The critical awareness and consciousness of reality that Freire termed as conscientisation entailed the power to transform reality (Taylor, 1993). For Freire, understanding the word and world were needed to move to problem-solving and bringing about change. According to Freire, conscientisation necessitated a critical “reading of the word” and affording students to be “dialogical subjects” (Freire, 1994, p. 111). An environment that promoted dialogue and collaborative action, and was non-authoritarian, fostered a deep and critical understanding of the world along with the hegemony within which one was situated. Students learned informed-decision-making and genuine problem-solving in such environments. Those attributes of critical thought and collaborative problem solving were needed before one could embark on affecting change. Conscientisation according to Freire was a prerequisite for empowerment and together these attributes led to the reflective process of praxis (Smith, 2002). The process of conscientisation necessitates democratisation.

**Democratisation**

Learning requires free interaction among subjects, and so Dewey promoted the need for
a learning environment infused with a spirit of democracy. For Dewey, democracy was more than a form of government and a way of governance. It was a way of life. For democracy to flourish in society, young people needed to learn to form and express opinions. Critical thinking and dialogical communication were requisites for forming a democratic society. Dewey promoted the concept of democracy in school, not as a subject to be studied, but rather a value to be integrated in everyday school practice. The concept of democratisation and power sharing within school was advocated among students and in the teacher-student context, where the teacher could move from being the sole source of knowledge to being a facilitator of learning (Dewey, 1916). Being able to express one’s opinions was also a salient feature of democracy. For Dewey diversity of opinions was a source of “growth” in a democratic society as each person could learn from another’s point of view (Dewey, 1916, p. 357). Dewey felt strongly that the role of schools was diametrically opposed to promoting “memorization”, conformity, “docility”, and “reproduction” of society’s hegemonic practices (1916, p. 356). In promoting democracy, Dewey stressed for equal opportunities for all students to develop “distinctive capacities” afforded through school (Dewey, 1915, p. 142). These affordances would enable each student to develop to the full potential and be contributing citizens. For teachers, Dewey stressed a facilitative stance of organized direction where students could reflectively relate their ideas and expressions in a democratic learning environment (Dewey, 1915, 1956).

**Empowerment**

Empowerment constitutes a shift in power relations, a disturbance in hegemony, and a realignment of roles. Within schools, students experience an empowering environment when the teacher adopts the role of a facilitator (Kiraly, 2014). In such settings students are encouraged towards inquiry-based learning from a variety of sources that may be within and outside their classroom and school. For students, empowerment also includes the ability and
AGENTIC ENGAGEMENT WITHIN PROJECT-BASED LEARNING

competency to work on their own and as collaborative members of a group or team, and the capacity to function independently of the teacher (Kiraly, 2014). Being able to think and act independently of the teacher to progress their learning is an empowering act and an agentic endeavour. For Freire, education is an “exercise in freedom” leading to empowerment (Freire, 1974, p. 23). Within schools, student empowerment reflects competency but is not limited to it (Kiraly, 2014). Competency can be understood as the ability to undertake increasingly complex tasks. That skill is developed in conjunction with autonomy, and nurtured in an environment of authentic practice. Other structures to bring about empowerment that have been available in schools are resources, opportunities, support, and information. Access to those empowerment structures and ability to use and influence these structures can also advance students’ empowerment (Freire & Fernandes, 2015).

Praxis

A next step to conscientisation and empowerment was praxis. Praxis for Freire was reflective informed action (Smith, 2002). Praxis moved critical inquiry and reflective thought to fruition through transformative action. At the same time, critical consciousness also emerged from praxis (Cammarota, 2016). Thus, praxis involved a cyclical and iterative process of reflection and action (Freire, 1973b). Praxis also referred to the dialectical integration of theory and practice (Lantolf & Poehner, 2014). The concept of praxis privileges inquiry based and experiential learning and transformation through critical thought and action. According to Freire (1973b), what has been missing in most learning contexts is dialogue. The dialogical process allows for engagement of thoughts and ideas and connection of theory and practice. Freire (1977) believed that education can be a “de-conditioning (and re-conditioning) process” initiated by the teacher enabling students to repeatedly transcend what is presently (pre) determined (p. 9). Through praxis, space is created for critical questioning of the dominant culture and expression of silenced
voices. During the course of praxis, the teacher’s role is perceived as walking with the student, allowing for a critical yet safe space for dialogic engagement with peer and teacher, to understand reality and consciously undertake inquiry and reflection leading to action that has elements of change and transformation. Freire advocated for praxis, as this iterative reflection-action process was for him the genuine culmination of education.

Social Space Related Concept

Field

Bourdieu used the term field to denote a social knowledge space (Grenfell, 2012, pp. 65–66) and a “social structure” (Weininger, 2005, p. 119). Fields are governed by a set of tacit rules (Weininger, 2005) which are understood and accepted by persons within the field. Those rules govern the operation of the field and are influenced by the specific history that shaped the field (Grenfell, 2012; Susen & Turner, 2011). The rules are also influenced by persons within that social space, resulting in the rules being “deeply ingrained into, and operative through, the cognitive and interpretive skills and practices of situated agents” (Susen & Turner, 2011, p. 281). Knowledge of rules and ability to interpret rules enables a person to leverage their position within a field and play with the rules of the game (Hillier & Rooksby, 2005). Within a social structured space or field, relations of power and privilege are also contextually expressed and positions of agents or persons within the field are constantly negotiated based on their habitus and capital (Weininger, 2005). Besides habitus and capital, the space and position a person occupies in a field is dependent on their agency, funds of knowledge, and sense of empowerment. These factors become “active in relation to a field” (Reay, 2004, p. 432). The power and privilege afforded to an individual within a field are also relational to the level of democratisation within the field (Grenfell, 2012). For example, a classroom where students are encouraged to create innovative plans and products to address real life problems, affords more power and privilege to students than a traditional
classroom where memorizing information is considered a valued skill. For students to be agentically engaged and gain new and multiliteracies, the education field needs to be transformed. And towards that realization, institutional agents wielding power within the field need to be able to draw from professional training.
Chapter Three: Methodology

As previously mentioned in Chapter One, I had the privilege of being a part of a multi-partner Digital Economy Research Team (DERT), observing students from two grade ten classes in a high school in Prince Edward Island as they worked on and created projects in various genres while being mentored by creative arts experts. My role as research assistant enabled me (1) to observe learning and document video data and (2) to maintain field notes of the semester-long DERT project process. Inspiration that began from a yawn—my daughter’s ‘boredom yawn’ while at school—kindled years later in 2013 by inspirational discussions around student engagement with the investigators of the DERT project and my past experiences with non-formal education enabled me to reflexively design the research framework for this study.

Epistemological and Ontological Framework

Research and every act of knowing are philosophical endeavours, and every research study follows ontological and epistemological frameworks that inform the methodological framework of the study (Corey, 2009). Research of social phenomena that are multidimensional, multidirectional, and multilayered, and allow for multiple perspectives, each one as true as the other, need to be reflective of these complexities. Grounding my work in ontological and epistemological understanding enables comprehension of ongoing debates and discourses, and calls me to focus on my prior understandings, usually those shared within the field one operates.

Epistemological and ontological frameworks are important in qualitative research as qualitative methodologies embrace inductive and interpretive reasoning to understand complex social phenomenon. As discussed above, these are interrelated, yet frequently unarticulated frameworks that bring to light one’s beliefs associated with the selected phenomena, along with what one currently understands of the phenomena under study; and
influences what one seeks to understand. One’s epistemological, ontological, and methodological frameworks also influence the kinds of analysis and subsequently the findings generated from research studies.

In this study, I have adopted a critical theory framework and upheld the existence of historical realism; these are based on social constructivism, and I endorse the existence of multiple realities (Killam, 2013). In the former, individual’s and group’s realities are shaped over time, influenced by multiple factors including the social, cultural, economic, and political, and can be viewed best in the context of social structures; in the latter, each of the multiple realities are viewed as equally valid as each reality is based on individual’s and group’s experiences and interactions (Killam, 2013). Within both the critical and social constructivist frameworks, the act of knowing is believed to be based on the person’s reality and thus has a subjective element. Thus, one of the crucial ways in which one can come to understand and draw meaning from individuals and groups operating in a social phenomenon is by paying keen attention to social interactions and behaviour, through observation. Students’ agentic engagement is a complex social phenomenon within plural or multiple realities, and thus, I adopted a critical theory based understanding (or a relativist ontology) combined with an understanding of constructivism (social constructivist ontology) for this study.

A critical constructivist stance allowed me to appreciate a “consciousness of complexity” and a realization that “things-in-the-world often involve far more than what one notices at first glance, [and] things that appear isolated and fixed are parts of larger, ever-changing processes” (Kincheloe, 2005, p. 30). As each social happening is unique, and can be time and context specific, the meaning derived from the data remains unique and while it is valid, it renders itself non-generalizable. Even so, researchers embracing a critical constructivist paradigm are cognizant of the necessity to see the bigger picture and endeavour
towards descriptions from the data that are more “constitutive of the social cosmos” in the reality being studied (Kincheloe, 2005, p. 122). Also, in constituting the social complexity, the researcher within this critical constructivist framework refrains from taking a stagnant and rigid positionality, allowing for a critical and social constructivist reflective analysis to emerge.

**Methodological Framework**

Student engagement has often been measured using standardised scales. A recent literature review by Fredricks et al. (2011) found 156 instruments measuring student engagement, out of which 21 measured student engagement in the K–12 age group. Of those 21 instruments, 14 were student self-reports on their engagement, three were teacher reports on student engagement, and four were based on observational measures. Further, half of the instruments based on observation, considered students’ time on task (Fredricks et al. 2011). Time on and off task is a quantitative measure of student engagement that might stem from a dominant and widespread, though narrow and reductionist understanding of student engagement. The use of quantitative methods to understand and assess a complex social phenomenon such as students’ agentic engagement can result in reduction of essential meaning. Consider using a scale that counts the amount of time taken for a student to complete a task, or the length of time for which a student is seated at a desk, or the length of time a student appears attentive, or the number of pages read by a student within a certain period of time, or the number of questions posed by a student. Or consider measuring the length of time a student maintains eye contact with her/his peer group, or the number of smiles, or nods by a student. Similarly, a measure of the number of times students in a group held a discussion, or conveyed support and encouragement through a pat on the back or a high five, can convey the social meaning of the actions only to a limited extent. All those measures convey some meaning, but do not convey the entirety of the meaning as the context
of these behaviours and social interactions are not delved into. Along the same lines, consider quantitative measures to assess student engagement if there is one student in the group who cheers loudly and often, almost eight to ten times during a session in a bid to encourage team members, and there is another student in the group appears quiet, almost reticent, but makes one critical comment that alters the group’s course of action and allows for time-management, creative use of available resources and effective teamwork, later towards the end of the session. As Stringer (2014) pointed out, “numbers can never tell us what the information ‘means’...” (p. 54). Thus, simply counting the number of times specific actions take place and measuring the durations of students’ actions indicating engagement may not suffice in grasping the meaning, and import of their actions. Further, students’ agentic engagement as understood by the definition forwarded in this study as students’ critical and constructive contribution to their own and peer learning, includes actions that are difficult to quantify, actions that are both verbal and non-verbal, and those that are overt and covert. At times, agentic engagement can also be expressed in silence and through inaction. Actions and interactions of students while in school, as in everyday life, are more impromptu and unpremeditated than reflectively thought out and preplanned. “Choices of action are often made spontaneously; a reflex responding to some cue, perhaps semi-or un-consciously...” (Hillier & Rooksby, 2005, p. 164). Thus, understanding of students’ agentic engagement and mentors’ pedagogical strategies need measures that are more than a self-rated checklist, or a series of ticks on a Likert scale questionnaire. Qualitative methods such as observation of a social phenomenon under naturalistic conditions provide a more holistic option for understanding the different dimensions and environmental variabilities of that phenomenon. Multifaceted phenomena such as students’ agentic engagement or mentors’ pedagogical strategies would be understood better and more deeply by using those qualitative methods.
Videoethnography

Ethnography is a preferred research strategy when social and cultural dynamics in naturalistic settings are to be studied and understood (Murchison, 2010). Adding the video element to this preferred research strategy Goldman, Pea, Barron, and Denny, (2014) presented videoethnography as the scientific investigation of human meaning making through video data. Primarily, videoethnography is concerned with “practical reasoning and meaning-making practices” (Goldman, Pea, Barron, & Denny, 2007, p. 135). In being so, videoethnography allows for meaning to be drawn from socially constructed reality (Russell, 2007). Given the complexity and often subtle nature of students’ expressions of agentic engagement as well as the pedagogic strategies employed by mentors, a videoethnography was chosen for this study to understand how students expressed agentic engagement within project-based learning, and the pedagogical strategies that influenced students’ agentic engagement.

Videoethnography is context specific and provides a framework to study social reality within a context (Goldman et al., 2014). Also, videoethnography allows for interpretation, analysis, and findings to be drawn from the “intrinsic context” (Knoblauch, Tuma, & Schnettler, 2015, p. 100). There are systematic steps advocated for videoethnography and these steps include subjecting each video clip in the sample to repeated viewing, paying very close attention to details, and avoiding hasty decisions (Knoblauch et al., 2015). Videoethnographers usually prepare a transcript from each video clip, yet, as happenings in a social context are more than verbal utterances that can be represented in a transcript, videoethnographers recommend preparation of a thick description of what’s going on in each video clip (Fels, 2010; Knoblauch et al., 2015).

Goldman (2007) posed five crucial questions any researcher is recommended to respond to prior to undertaking videoethnography. The first was centred around the
affordances and problematics of using video in the learning sciences. Goldman (2007) highlighted the need to think about what one would learn while video recording, viewing the video recording, and from the analysis of the video recording that one might not be able to learn without the use of this particular medium. For me, the primary objective was to answer the two research questions; first, related to expressions of students’ agentic engagement, and second, related to pedagogical strategies that influenced students’ agentic engagement. Both those questions needed answers that could be derived from holistic analysis of students’ and mentors’ everyday interactions. For high school teachers who might often wonder what students did when not being witnessed by an institutional agent, video recording would present unmatched and authentic information.

A second part of this question was to understand that despite one’s best efforts to be inconspicuous and sensitive, one cannot in all honesty state with surety whether the presence of the video camera influenced behaviour and interactions of the research participants. Researchers need to confront “how the medium of video affects and changes the culture one is studying from the moment the camera is turned on” (Goldman, 2007, p. 5). She rescues the researcher’s dilemma by stating that “while actions might be affected by the presence of the camera,” the researcher’s role is to “accept the performative actions” that are demonstrated whenever these were being observed (Goldman, 2007, p. 5). So with all honesty, I can state that while the students and mentors appeared to be comfortable with the video camera recording their interactions, I cannot take for granted that they were not influenced by the video camera’s presence, and if they were influenced, the direction and extent of the change in interactions brought about by this influence. What I can do and did as a researcher in this study was to accept the reality of student experiences as recorded in real time, viewed without edits, and invite a plurality of perspectives from other researchers to ensure validity.
The second question posed by Goldman (2007) related to whether video recording was used solely as an evidentiary tool or also as a media to tell the story of what happened as it happened. The video recording or a footage of the research site and research participants, quite often with the researcher in the frame, was used to prove that the researcher was there and had collected these data. As I was a research assistant on the DERT project responsible for data collection, the process of video recording for me was privileged time with the students. The trust placed in me by students and their mentors was an additional privilege. The possibility to journey with students, observe them, and learn how they learned and expressed agentic engagement was yet another privilege. Twinned with that was the opportunity to be with the mentors, observe them, and learn how they mentored students.

The third question concerned how the video recording was planned to be used. Was the data to be used to create a thick description of what happened, or was the video data to serve analysis of a particular time and space, or was it to be used as a compelling storytelling medium. In this instance, the video recording was gathered and analysed without edits. A holistic story was created through a thick description of what happened with the range of verbal and non-verbal communications, interactions, and contextual dynamics (Goldman, 2007, Knoblauch et al., 2015). The videorecordings were by no means a show and tell piece, though it would have made for interesting story presentation. The ethics boards at the University of Prince Edward Island and the Prince Edward Island English Language School Board mandated that student identities remain anonymous and specific views expressed by students remain confidential. Both directives of the two ethics boards were strictly and carefully followed.

The fourth question was around the significance of using video as a research tool so as to ensure that the best media was selected for data collection. As stated earlier, oftentimes teachers are unaware of how students work when they are not being closely and physically
monitored by them. In fact, teachers may doubt if students learn at all when left by themselves. There may be fears of chaos ensuing, or perhaps fights, disagreements, loud or whispered chatter, and other behaviour that may constitute indiscipline. Overall, the major fear would be diminished time on task and, as a consequence, incomplete curricular work. Also, students who are asked to assess their level of engagement on a self-reported Likert scale questionnaire may fill out what they want to share regardless of whether their answers reflect reality. Likewise, teachers may state verbally and on paper epistemological beliefs that they hold dear and perhaps think they practice, instead of a reflection of what they are able to practice in reality. An outsider’s objective eye in the form of a video camera lens is able to capture reality as it unfolds with no prejudice or suppositions and offer lived stories as they happened.

The last question was directed towards ethical considerations. Goldman (2007) cautioned against the objectification of research participants and asks researchers to stay wary of the desire to “display” research participants as this tendency may be reflective of the remnants of a colonial practice to showcase the exotic and different. Following this important cautionary note, as well as the University of Prince Edward Island Research Ethics Board’s and the Prince Edward Island English Language School Board Research Ethics Board’s directives to respect student identities, I refrained from using photos and video clips from the research study, even though they might have contributed by way of illustration and specific examples. Further, in keeping with the directive of the two research ethics boards, viewing of the video recordings was confined to two of my supervisors, the Principal Investigator and co-investigator in the larger DERT project, and me as the researcher for this study.
Procedures

In this section I describe the procedures and tools used for data. I also present the sampling technique employed, along with the rationale for using this technique and the steps followed in selecting the sample. Next, I present the plan for data analysis and share briefly the evolution of the thought process and refinement of the guidelines for data analysis. The steps followed for conducting an analytic induction are also presented.

Data Collection Techniques

In the present study, video recording was the primary data collection technique, supplemented by field notes. These techniques allowed for direct observation as the happenings were taking place and for repeated observation after data collection was completed. According to Patton (2002, pp. 262-263) direct observation has the following advantages: 1) understanding the context in which persons operate; 2) inductive understanding of dynamics within a setting; 3) understanding of routines, practices that are within the subconscious understanding of the persons within the setting (e.g. classroom culture, assessment practices, attendance taking procedure, grouping practices, etc.); and 4) learning about aspects participants may not be comfortable discussing in an interview (for example, students’ experiences with certain mentors).

Video recordings permitted recording of real life experiences as they happened, and later, sequential analysis of the dynamic, peer-peer, and student/mentor/teacher interactions, informal participation frameworks, non-formal work agreements, distribution of tasks and responsibilities, and other subtle interactions and happenings. Intended and unintended actions of students and mentors were captured in real time for possible repeated and multiple viewing at the analysis table. Those included dynamics of the interactional space, and verbal and nonverbal communications (gestures, facial expressions, glances, body postures, movements, etc.). Other multimodal specificities of the myriad social interactions could be
observed multiple times for greater in-depth analysis and for more reliable and trustworthy findings.

Video recordings captured subtle, subconscious, and spontaneous actions as they occurred naturally in everyday routine, or even in specific situations (Fele, 2008). Video recordings were important also as they recorded interactions among students and with their mentors that had not been deliberated upon. Such spontaneous interactions would have little to no possibility of being penned down in any self-reported assessment sheet, or expressed explicitly during focus group or individual interviews. Another advantage of video recording was that it allowed the recording of multiple simultaneous interactions that may have escaped human observation as an individual’s eye can focus either on a singular interaction or a couple of interactions at a time. Still further, non-verbal, covert and subtle interactions can be studied from repeated or multiple viewing of video recordings. Fine details of interactions that are needed for in-depth analysis can also be observed from such repeated viewings. Still further, video recordings hold rich data that are observable and thereby describable and not based on imaginative expressions of the researcher (Mondada, 2008).

Despite the advantages of video recording, Goldman, Pea, Barron, and Denny (2007) cautioned that “the point of view of a camera is always limited” (p. 178). Thus, a second technique of field notes based on direct observation was used for this study. Besides being a second technique, field notes served to enrich the video data (Goldman et al., 2007, p. 178). Field notes were prepared through my observation of the day-to-day classroom activities of the students and mentors including informal conversations, to supplement the video recording. Together, video recording and field notes contributed to establish reliability and validity of data. Those two data collection techniques also contributed towards “data triangulation” (Patton, 2002, p. 247) and enhanced trustworthiness, or the extent to which the findings would be “worth paying attention to” (Lincoln & Guba, 1985, p. 290).
Data Collection Tools

The portable digital video camera was mounted on a tripod and deployed in strategic and unobtrusive locations to study interactions in natural settings. A portable microphone was attached to the digital camcorder and was used to record verbal communication. Most times, more than one group of students shared a common space within the classroom or school library while working on their projects and voices of students (and mentor) from one group merged with discussions taking place among students (and mentor) from another group.

Data Collection Process

As mentioned earlier, data was collected from students in two grade ten classes at one of the high schools participating in the DERT project from October to December, 2013. Data collection was conducted two days a week for nine weeks from each of the two grade 10 classes. As duration of each class was 90 minutes, the total length of video data collected was 3060 minutes or 51 hours. Video recording was done sequentially, one group after another. The order of videographing each group was altered so as to gather data from each group at different times during each 90 minute session. Effort was made to ensure that all students could be videotaped in subsequent recordings, so as to add to the richness of the data, and entirety of the PBL process and students’ experiences. Some students were interested to view the video recording as it was being done, and they had the opportunity to do so. Their viewing of the video recording in progress seemed to provide them with a feeling of security, clarity, and assurance on what was being recorded, and how their work and interactions were being recorded—for themselves and for their classmates.

While students and mentors were aware of the placement and positioning of the video camera, they were able to carry on with their activities undisturbed. Understanding that if there is no human observer, the video camera may appear less intrusive, I made a conscious
decision to move away from the video camera after it was set up. This was done so as to retain the naturality of the process being recorded. Naturality as explained by Knoblauch et al. (2015) meant that the research participants, the students and their mentors, and the situations of their project-based learning “were not arranged solely and principally for research purposes” (p. 46).

I proceeded to observe and take field notes of other groups of students while video recording was being done. I also took notes from informal conversations with students, mentors, and the teacher at different times. Those notes were written down prior to discussion with anyone and followed a lucid conversation style with factual information. In the field notes, information obtained from observations, small talk, and informal conversations that seemed even slightly pertinent were noted down. The field notes avoided noting down of feelings to ensure objectivity in the writing. All field notes were typed and dated. As far as possible, attempts were made to make the notes complete, concrete, and comprehensive. Once written-up, those field notes were shared via e-mails with Dr. Sean Wiebe, the P.I. to whom I was reporting as a research assistant.

Video data was recorded onto memory cards inserted in the video camera. In all there were three memory cards full of video data towards the end of the semester. All video data were transferred onto an external hard drive so as to be in one place, and arranged by group and date. That external hard drive was then placed in a safe and secure, locked cabinet. All field notes were also kept in a separate online folder with password protection.

**Sampling Design and Procedure**

Upon conducting a trial run and viewing all the video recordings, it became clear that I needed to adopt a purposeful stance for sample selection. According to Patton (2002) a purposeful sampling design is appropriate when the main objective is to draw from
“information rich” and “illuminative” representations of the phenomenon under study and not necessarily to make broad generalizations (p. 40). In keeping with this understanding, I adopted a purposeful sampling design for the present study. More details on the sampling design are enumerated later in this section.

As an initial plan I drew a sample of videoclips strategically from the nine weeks of available video data. Overall, video data was available for an entire semester beginning from October until December 2013 and was 51 hours in duration. According to the initial sampling plan, video data were to be selected from different phases of the project as representative of the possible different stages of the projects’ development, students’ interactions, expressions of students’ agentic engagement and environmental variabilities. Initially, I drew samples from one week’s data from the beginning phase in October, one week’s data from the middle phase in November, and two week’s data from the final phase in December. This plan was revised after a trial run was conducted. In discussion with my supervisors, I realized that it may be more worthwhile to select cases or groups of students and follow them throughout their nine weeks of PBL. Happenings from one week influenced students’ interactions the following week. Also, knowledge of what happened in the previous weeks was important as it brought a contextual background and heightened understanding to the interactions being viewed. In keeping with this insight, a revised plan for sampling was drawn up. According to this sampling plan, four groups of students were to be purposefully selected from the pool of projects.

In the two grade ten classes at the high school within this study’s purview, there were a total of 16 projects. There were nine small groups of students comprising two-to-six students each, and there were seven students who chose to work individually with their mentors. From the nine small groups of students working undertaking PBL, there were five groups who worked on projects of a digital nature, and four groups of students who worked on
projects of a non-digital nature. Projects of a digital nature created by small groups of students included: a comic strip using edited photography (with a four persons’ group); a stop-motion comedy video (with a three persons’ group); an animation (with a six persons’ group); a music video (with a five persons’ group); and a short comedy film (with a five persons’ group). Projects that were non-digital in nature undertaken by small groups of students included: an acrylic on wood (with a two persons’ group); a short stage play (with a five persons’ group); a children’s storybook (with a five persons’ group); and a sock puppetry (with a six persons’ group). Projects undertaken by students individually included a compilation of short stories: an acrylic portrait; a mural; an acrylic on wood; and an acrylic painting. From this pool of 16 projects, the revised sampling plan was to draw four groups of students with two groups of students working on digital projects and two groups of students working on non-digital projects. According to this sampling plan, the two groups working on digital projects shortlisted for inclusion on the study’s sample were the groups working on a music video, and an animation film; and the two groups working on non-digital projects for inclusion on the study’s sample were the groups working on a stage play and a children’s book. How the groups’ worked together was the primary content of observation and so the cases were identified as the group working on the digital or the non-digital projects and not so much the specific projects themselves. These four cases were proposed to be included in the study’s sample after the trial run. Later, after viewing all video data, this sampling plan was further revised in accordance with findings from the trial run and after applying the inclusion/exclusion criteria. One of the main inclusion criteria was quality of video recording, and another was continuity in video recording. After applying those two inclusion criteria, video recordings of two groups of students were selected from among the 16 student groups. The first group of five students worked on a non-digital stage play project, and the second group of five students worked on a digital music video project.
Criteria for Inclusion

After the trial run, and after understanding the nature of video data available, inclusion criteria were drawn up and considered the following points:

1. Richness of data in terms of observable social interactions.
2. High quality video data, especially audio quality.
3. Continuity of video recording.
4. Possibility of observing different pedagogical strategies.

The first criterion provided the possibility to view groupwork in order to observe students’ agentic engagement, nuances of collaborative work, inter-personal interactions, and group dynamics. While all students are understood as agentic beings in this study, expressions of students’ agentic engagement could be viewed best in and through social interactions. Thus, in order to observe students’ agentic engagement it was considered necessary to observe students in group settings. This was not to convey that students working independently were devoid of agency and agentic engagement, but simply implied that it would be more difficult to observe agentic engagement of students working by themselves as a group of one interacting solely with their mentor on an as and when needed basis. The second criterion was quality of video data and observability of group work so as to understand and assess expressions of students’ agentic engagement as well as the environmental variabilities. The focus on group work was mainly to observe interpersonal interactions and expressions of agentic engagement. These interpersonal interactions included student-to-student; student-to-mentor; and mentor-to-student. All video clips had recorded video data that was sharply focused. The video recordings focused on the students and the activities they were involved in. Some video clips had zoomed in on one or two students, while most other video clips had recorded a panoramic view. Most video
recordings with the panoramic view had recorded the mentor and with them their interactions with students along with students’ interactions with the mentor. Thus, visibility of interactions was possible in almost all the video clips.

However, clarity of audio recording emerged as a concern in determining quality of video data or video recording. Video clips in which sound quality was disturbed, poor, or non-existent had to be excluded from the study as these contributed insignificantly to my objectives in the study. Unexpectedly, there were video clips that had either poor audio or no audio. The occurrence of poor to no audio quality in some video clips was found to be random and did not follow any pattern in terms of date of recording or time of recording. According to records available with the staff at UPEI’s Audio Visual unit from where the video recording equipment including the mic were loaned, audio quality had possibly been disturbed or had been found lacking due to the fact that the batteries in the mic were almost three years old and were due to be replaced. Added to this was the fact that the portable mic attached to the video camera had no device to indicate low to nil battery life responsible for the loss of observable video data. As a result of applying the second inclusion criteria, video recordings or video clips with little to no audible interactions were also excluded from this study as this reduced possibility of observing and analysing social interactions, students’ agentic engagement and environmental variable such as pedagogical strategies. After these two inclusion/exclusion criteria were applied, there were three groups of students left to select from. Those three groups of students had worked on a stage play, a music video, and a short comedy film. The last group of students had worked with two mentors, one of whom provided expertise on script writing and acting, and the other provided professional facilitation in filming. While I had clarity on the two mentors’ roles in theory, it was difficult to observe their roles and the pedagogical strategies they had employed with the students in the video recordings. Further, the number of video clips available for that group was limited.
The dearth of video recording from that group could have been due to the fact that the group was working on days that were different from the rest of the groups. In consultation with the grade ten ELA teacher, the DERT research team had decided on video recording students and mentors from both grade ten classes on the same two days every week for the entire semester. On the other hand, the creative arts professionals and mentors had the freedom to choose and alter the days they were able to work with their groups of students to ensure sensitivity to the professionals’ other work commitments. Paucity in number of video clips, and difficulty to observe students’ interactions with their mentors, resulted in the de-selection of that third group of students for this study. Overall, careful and thorough application of the four inclusion criteria specified above on each video clip in the video data set enabled a decision on the two groups to be selected for this study.

**Data Analysis Plan**

The process of inferring and analysing observations of real life happenings recorded through videorecordings is gaining popularity in the social sciences and qualitative research as it affords opportunities to naturalistically view and interpret life as lived and experienced by the persons in the study. Goldman-Segall (1998) who has spent more than two decades as a videoethnographer noted that people tended to be more themselves than perform when they are being videotaped. She added, the more people were exposed to being videotaped, the less they seemed to be conscious of it. Still further, she pointed out that in a way every act, however conscious or subconscious, is still a performance—as the clothes we choose to wear—as with these acts messages are being sent to others. In any situation, we will never know if the participants are being totally honest, sincere, and objective for the participants may be offering their point of view, and their understanding at the time through spontaneous action.
For data analysis, every ethnographic endeavour must rely on understanding the social and cultural meaning making of the people being studied: This includes understanding the happenings and understanding social reality along with the conditions or factors in an environment that are in relational existence with the action taking place in the environment. For this, repeated and reflective viewing of the data is required. Each viewing may bring about some understanding of the meaning-making in progress and each subsequent viewing was planned to enable a metareflective stance. Overall, three key questions were proposed to ask oneself while viewing each video clip (Goldman et al., 2007). The questions were suggested in a supervisory committee meeting on the proposed data analysis plan to draw a rich description of what was happening in each video clip from the two selected case studies. Those questions were:

1. What is going on or what is happening?
2. What decisions are being made?
3. Who is making these decisions?

Following a rich description drawn from multiple and repeated viewings of each video clip from the two selected case studies with those three questions in mind, an analytic induction was proposed to draw out expressions of students’ agentic engagement. The paragraphs below detail the process of designing the analytic induction process as well as the development, revision, and refinement of the guidelines for data analysis.

**Analytic induction.** Analytic induction brings a specialized logic to videoethnography (Goldman et al., 2007). Through inductive reasoning specific examples drawn from the data can be used to frame broad generalisations to a larger population (Christine, 2014). From the data, patterns can be extrapolated to apply within similar educational settings. In analytic induction, a model from literature or previous research is used to help inductive analysis.
this study a modified version of the stages of people’s participation (Bosco, 1997) has been introduced and is presented as a stage theory model of students’ agentic engagement comprising the recipient stage of agentic engagement, the partnership stage of agentic engagement, and the ownership stage of agentic engagement. In the following paragraphs a description of the stage theory model of agentic engagement is presented. The description given here served as a guideline to perform an analytic induction and analyze students’ agentic engagement within project-based learning, and factors influencing students’ agentic engagement.

As a recap of what has been discussed in the previous chapter, Reeve and Tseng (2011) defined agentic engagement as “students’ constructive contribution into the flow of the instruction they receive” (p. 258). In this study, students’ agentic engagement has been defined as “student’s critical and constructive contribution to their own and peer learning.” That definition builds on the earlier definition of Reeve and Tseng (2011) to encompass a more social constructivist and critical constructivist understanding of students’ agentic engagement in their learning process. Importantly, this new definition situates students as having the potential to be critical and constructive stakeholders in their learning. Further, by including the word peer, this definition acknowledges and emphasizes the social component to promote learning and agentic engagement. Still further, this new definition implies learning as a multidirectional and multidimensional iterative process.

As discussed in Chapter Two, student’s agentic engagement can be understood as a process, and the variations in magnitude of agentic expression can be understood as stages. The process of students’ agentic engagement can be categorized into fluid, inter-related, and sequenced stages according to the intensity and magnitude of self’s action towards a desired change that is overtly or covertly projected.
The initial stage is termed the recipient stage of agentic engagement or pre-agentic stage of students’ agentic engagement. At this stage, students are unaware of the possibility of agency and seek only to do tasks assigned to them. In business parlance, the student operates as if s/he is a consumer in the teacher/school operated business venture. The teacher’s role is that of the dispenser of the knowledge needed for student learning and students act with the belief that their role is to comply with school based rules and regulations, and follow instructions given by the instructor. As recipients of mandated knowledge, students’ agentic engagement is virtually non-existent.

The next stage is the partnership stage of agentic engagement. In business parlance, at the partnership stage of agentic engagement, the student operates as if s/he is a partner in a business venture along with her/his peers. The teacher’s role at this stage of students’ agentic engagement is again that of a stakeholder and facilitator in the process of students’ learning. At this stage of agentic engagement students act with the knowledge and confidence that they can seek the assistance of either the teacher or a peer as both the teacher and peer are partners in the process of learning.

Instances of taking initiative and leadership, point towards a sense of ownership in the process. Thus, students’ taking leadership and initiative, offering suggestions and providing alternatives can be understood as students’ participation at the ownership stage of agentic engagement. The ownership stage of agentic engagement may also be understood as the highest stage of agentic engagement. In business parlance, at the ownership stage of agentic engagement, the student operates as if s/he is the owner of her/his business venture that is her/his learning. The teacher’s role at this stage of students’ agentic engagement is that of a stakeholder and facilitator in the process of students’ learning. At this stage of agentic engagement students show evidence of initiative, planning, extra effort and risk taking. They also offer suggestions and alternatives to improve upon their present work. At this stage,
students may not act as if they know everything, but definitely act as if they know where to obtain the resources they need to achieve the desired learning goal.

**Guidelines for Observation**

Guidelines for observation evolved through this research and saw at least three sets being drawn up. Each set of guideline improved on the previous with extended reading of literature and similar research studies, a trial run of the video data analysis, and feedback from my supervisory team. The guidelines were drawn for observing behaviour and social interactions so as to understand expressions of students’ agentic engagement and factors influencing their agentic engagement. The first set of guidelines focussed on phrases that might be indicative of stages of students’ agentic engagement. Following the trial run it was clear that students’ behaviour was more observable than verbal phrases could be heard, and so a second set of guidelines focussing on verbal and non-verbal behaviour was drawn up. Later, based on extensive literature on videoethnography, and learnings drawn from the trial run, a third set of guidelines were prepared. All three guidelines are shared below.

**Phrase-Based guideline.** This initial guideline listed out the key characteristics of each stage of students’ agentic engagement and possible phrases that may be articulated or spoken by students within project-based learning. It would be important for me to mention here that this initial guideline was drawn up before viewing any video data. That was also a reason for the guideline’s subsequent revision.

The recipient stage is based on students’ traditional understanding of education, and is expressed through conformist behaviour and action. Thus actions and/or words describing that students perceive themselves as objects in their learning process and rely almost completely on their teacher’s directions for completion of school-related work depict engagement at the recipient or pre-agentic stage. According to this first set of guidelines, phrases indicating engagement at the recipient or pre-agentic stage, would include:
AGENTIC ENGAGEMENT WITHIN PROJECT-BASED LEARNING

- I’m doing this because I am supposed to.
- I am doing this because the teacher asked me to.
- I cannot make any decisions.
- I have to undertake tasks as directed by the teacher.
- The teacher will tell all of us what to do.

The partnership stage of agentic engagement is based on students’ constructivist understanding of teaching and learning and is expressed through collaborative learning work. Students at this stage of agentic engagement can be heard or seen collaborating with either their peer or teacher. Some of the phrases to guide assessment of students’ agentic engagement at the partnership stage were:

- I can ask my teacher when I need more information.
- I can receive my teacher’s help to resolve this issue.
- I can ask my teacher to help me find the resources I need.
- I can rely on my peers for some information and resources.
- My peers can also rely on me for some information and resources.

The ownership stage of agentic engagement is based on students’ critical understanding of education, and is expressed as students’ purposive contribution to their own and others’ learning. At this stage of agentic engagement, the learning environment is authentic, student-directed, and student-determined. Students can be observed actively participating in learning tasks, taking initiative and offering ideas, suggestions, and recommendations. It is not presumed that students at this stage have all the knowledge they require. Instead, students at this stage of agentic engagement are aware when they need help, and frequently also know where to get the answers or the help they need. At this stage, similar to the previous partnership stage, students can be observed contributing to their own and others’ learning. Students at this stage exhibit a critical understanding of their role in their education and can
be observed posing significant questions, giving ideas, and offering suggestions. Some of the phrases to guide assessment of students’ agentic engagement at the ownership stage were:

- I know how to undertake and successfully complete this learning objective/task.
- I have an idea and I can share it or work on my idea.
- I have a question.
- I can offer a suggestion.
- I have a recommendation.
- I can offer an alternative/ I can propose an alternative.

**Behaviour-Based guideline.** A grid was prepared to observe and assess students’ agentic engagement. That grid contained aspects of possible verbal communication in the form of phrases and non-verbal communication in the form of gestures and mannerisms that would be indicative of students’ agentic engagement.

Table 1. Guidelines for observation of expressions of students’ agentic engagement stages within project-based learning.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Stages of Agentic Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Recipient Stage</td>
</tr>
<tr>
<td>Verbal Communication</td>
<td>Yes, Ok, Whatever,</td>
</tr>
<tr>
<td></td>
<td>I would like some</td>
</tr>
<tr>
<td></td>
<td>suggestions; I can do</td>
</tr>
<tr>
<td></td>
<td>with some help;</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Could you tell me how to proceed? for it…

<table>
<thead>
<tr>
<th>Non-Verbal Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Body Posture</strong></td>
</tr>
<tr>
<td>Passive, lax, bent</td>
</tr>
<tr>
<td>backwards, looking</td>
</tr>
<tr>
<td>away, Bored</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Alert, interested,</td>
</tr>
<tr>
<td>bent forward</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Alert, involved,</td>
</tr>
<tr>
<td>proactive, lean forward</td>
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</tbody>
</table>

Agentic Engagement at the Ownership stage: student was taking initiative, making decisions, being proactive, putting extra effort, shows signs of internal motivation, interest, shows curiosity, asks questions to learn and understand, gives suggestions.

Agentic Engagement at the Partnerships stage: student participated enthusiastically in tasks, and was prompted in doing so either by the instructor/mentor or a co-student/peer.
Engagement at the Pre-Agentic or Recipient stage: student simply followed instructions without questioning, or apparent reasoning.

That table served to inform the kinds of verbal and non-verbal communication by individual students that indicated their participation at the different stages of agentic engagement. Though useful, guidelines one and two, presented a more or less rigid and reductionist understanding of the multidimensional and complex phenomenon of agentic engagement, especially as they provided no allowances to include the social environment and interpersonal interactions while understanding students’ agentic engagement. Both these guidelines served only to inform observation of individual students’ agentic engagement and thus both guidelines were not used to make decisions or analysis on expressions and stages of students’ agentic engagement.

Following the trial run or pseudo pilot project mentioned earlier in this chapter, it was decided that analysis and findings corresponding to the three research questions relating to expressions and stages of students’ agentic engagement, environmental variabilities, and pedagogical strategies influencing students’ agentic engagement would be based on a rich description of the happenings in each video clip and not on a pre-planned phrase-based or grid-based guideline.

**Comprehensive interaction-based guideline.** The third and final set of guidelines incorporated suggestions of my supervisors (Dr. S. Wiebe, Dr. R. MacDonald, and Dr. P. Gouzouasis) and other videoethnographers such as Fels (2010), Goldman, Pea, Barron and Denny (2014), Knoblauch, Tuma and Schnettler (2015), and Pink (2007). Those scholars advocated a principle of holism and that the whole was more than the sum total of individual parts. Analysis of individual videoclips that recorded short instances and moments in time may reveal important information, yet each videoclip represented just a small piece of the entire reality. Thus, the third set of guidelines emphasised a holistic and comprehensive
understanding of the happenings in the video recordings and recommended a series of steps to follow, not necessarily in a chronological, one-after-the-other, or in a linear order. The first step entailed multiple viewings of each videoclip. A second step involved preparing a thick description of the happenings. A third step was to understand happenings through the three questions, what is happening; what decisions were being made; and who was making those decisions? A fourth step was paying attention to “stop moments” (Fels, 2016, p. 217). Those stop moments were instances that called one’s attention to and on what mattered, instances that made me stop and think, why something was happening or not happening.

The steps enumerated above have been listed in order for the sake of simplicity, though in actual practice the steps overlapped and sometimes also combined with each other. Overall, this third set of cautioned against drawing analysis of video clips after the first viewing, and recommended that I wait to write my analysis from each video clip until I had viewed it at least two to three times. In actual practice, I viewed each video clip at least four to five times. And sometimes, I viewed a video clip even six to eight times, particularly when there were many subtle interactions to be observed, each time growing in depth of understanding. However, viewing a video clip so many times was more an exception than the norm. In keeping with the third set of guidelines, data analysis and a summary of findings were drawn through metareflection on stop moments (Fels, 2010, 2016) that arose especially after repeated viewings of the videorecordings.

**Trustworthiness**

In qualitative research, trustworthiness as a concept encompasses concerns around validity, reliability, credibility, dependability and transferability (Graneheim & Lundman, 2004). Quite often, if not most often, qualitative research deals with understanding human behaviour and thus findings from behaviour observation need to be viewed from trustworthiness angles rather than replicability and generalizability angles (Arnold & Clarke,
2012). Behaviour and social interactions in naturalistic settings take place in real time and these can be recorded and replayed, but behaviour and social interactions cannot be replicated in precisely the same way as they are context and time specific. Thus, studies that draw data from behaviour and social interactions emphasize trustworthiness rather than replicability and generalizability of findings. Trustworthiness of a study determines the extent to which the study’s findings can form the basis of understanding the phenomenon under consideration in the given study as also in other similar settings. Trustworthiness stems from the research design and how comprehensive it is.

I derived trustworthiness in the present study from a multiplicity of steps: first, authentic raw data was gathered through naturalistic inquiry methods (Phillips & Carr, 2009); second, nuances and dynamics of interactions among research participants were noted through prolonged and persistent observation (Creswell, 2008; Miskovic, Efron & Ravid, 2012) and with a stance of balanced yet empathetic neutrality (Patton, 2002); third, multiple methods of data collection—video recording and field notes—were adopted; fourth, data on the phenomenon of students’ agentic engagement and pedagogical strategies were analysed without a predetermined set of results in mind, but rather with a commitment to observe and understand students’ experiences as they unfolded (Patton, 2002); and fifth, member-checks by principal investigators of the DERT research team were conducted for data analysis guidelines and for preliminary analysis after the trial run.

To a great extent, trustworthiness can be achieved through detailed description of the data collection, and most importantly a detailed description of the process of data analysis including the methodological framework and the steps employed in generating findings. A step-by-step or detailed description of the methods and tools used in visual research contribute towards trustworthiness of the process and later the findings. Another means of incorporating trustworthiness was to bring in multiplicity, in terms of viewers. Viewing of
the data by other members to increase trustworthiness is also referred to as a member check (Hays & Singh, 2011). For member checks, the principal investigator and a co-investigator of the DERT research project viewed and validated my initial findings. More specifically, one of them cross-checked my interpretations and findings with their field visit observations. The other person viewed sample video clips and cross-checked their interpretation and analysis with mine to verify and confirm trustworthiness of findings.

Research findings that rely on trustworthiness as I have proposed, rather than on formulaically validated results, are at times perceived as being subjective instead of objective. Bourdieu (1990b) critiqued such dominant notions of objectivity and empirical evidence oriented studies that underplayed and subordinated findings from research studies in the social sciences:

There is only a perspective seeing, only a perspective knowing; and the more affects we allow to speak about one thing, the more eyes, different eyes, we use to observe one thing, the more complete will our concept of this thing, our objectivity, be (p. 28).

As a third step, towards enhancing this study’s trustworthiness, detailed and clear descriptions of the process of data collection and data analysis were adopted, besides the two methods of data collection mentioned earlier—video recording and field notes—for triangulation of data. Those detailed descriptions traced the mental steps I adopted in designing the analysis criteria, and the analysis process. Learnings from my trial run were also incorporated as steps in the data analysis process.

**Ethics and Related Aspects**

The University of Prince Edward Island’s (UPEI’s) Research Ethics Board was consulted to understand the process that I needed to follow for this study because data from a larger research project was used. We were informed that the Principal Investigator (P.I.) needed to permit use of the data. An official permission letter was provided by Dr. S. Wiebe,
the P.I. of the DERT project (also my Ph.D. Supervisor). Following the receipt of that letter permitting me the use of a dataset from the DERT project, UPEI’s Research Ethics Board advised me to follow the Research Ethics Exempt Review application process. This Research Ethics Exempt Review application also provided confirmation that I had collected the requested data set myself while working as a research assistant in the larger DERT project, and specified the data collection methods. Still further, this application provided confirmation that research participants’ anonymity would be maintained and that use of the smaller data set was primarily and solely for purposes of this Ph.D. study. The letter from UPEI Research Ethics Board granting a Research Ethics Exempt Review approval is attached (See Annexure A). A permission letter provided by Dr. Sean Wiebe, the P.I. on the DERT project allowing me to use a subset of the data obtained from high schools has been provided as Annexure B.

**Informed Consent**

Informed consent was sought and obtained from all volunteer students and mentors who wished to participate in this study. All study participants were also informed that they could withdraw from the study at any point in time with no adverse consequences whatsoever. Contained in the information letter and consent letters were permissions to use any or all data including notes, photographs and videorecordings in print and electronic form. Thus, all necessary steps were taken to ensure informed consent from voluntary student and mentor participants.

**Anonymity and Confidentiality**

Anonymity and confidentiality of each student participant, mentor, teacher, and school have been maintained in this study. Pseudonyms were used for all students and mentors in the two selected cases. Those pseudonyms served as identifiers throughout this dissertation. In case it proved necessary, it was planned that faces of participants would be slightly blurred
in the final report. However, this has not been required and no images, stills or clips from the videorecordings have been used in this dissertation to ensure anonymity and confidentiality of all students, and mentors who participated in this study.

To ensure safety and confidentiality, the collected data, have been stored in secure locations. Videorecordings have been stored in an external hard drive and are kept in a locked cabinet, accessible only to members of the DERT project. Field notes have also been maintained online in a password protected folder. When data analysis was being undertaken, data were transferred from the external hard drive to the selected computer for qualitative data analysis and later were stored again or were retained in the locked cabinet.

**Assumptions**

During data collection, it was assumed that it would be possible to video record all groups of students with their mentors for a specific time period twice a week. However, all mentors were not able to work with students on the same two days a week, and so video recording of some groups went on longer than others. An unexpected limitation was experienced around the quality and volume of sound from the student and mentors’ voice recording. It was assumed that a microphone attached to the video camera/camcorder, placed near the students’ group would sufficiently capture all verbal communications in the group. However, subsequent examination of video data after the project was over, revealed some video clips had little to no audio.

**Scope of the Study**

This qualitative study based on a critical constructivist paradigm using visual methodologies serves to better inform teachers and educators on possibilities of students’ agentic engagement within project-based learning settings. The study throws light on student experiences and expressions of agentic engagement while working with and without digital technologies. Overall, the study highlights the complex environmental variabilities
influencing students’ agentic engagement along with understanding the fluid and dynamic stages of students’ agentic engagement. In understanding students’ agentic engagement, findings and discussions drew on Bourdieu’s concepts of habitus and capital. Students’ agentic engagement as influenced by complex experiences with project-based learning and specifically with digital technologies was also studied (Beckman, Bennett, & Lockyer, 2014). Further, findings on effective pedagogical strategies enhanced understandings on appropriate scaffolding of students such that their agentic engagement is heightened and expressed in classroom settings.

This study was situated within a broader multi-partner study covering two high schools in the experiment group and three high schools in the control group. The sample for this study was drawn from two grade 10 classes with their five mentors from one high school on Prince Edward Island. Since this study was a part of a larger study, findings from the study can initially be considered applicable to that larger study, and thereafter to other high school settings both within PEI and outside of PEI.
Chapter Four: Analysis and Findings

Background

In 2013, a multi-stakeholder research project entitled *A University, College, Government, Community Partnership to Transform Education for Employment in the Digital Economy* was spearheaded by Dr. Sean Wiebe and his colleagues (Dr. Ron MacDonald, Dr. Martha Gabriel, Dr. Barbara Campbell, Dr. Sandy McAuley, Dr. Lyndsay Moffat, and Dr. Jane Preston) at the University of Prince Edward Island (UPEI). The group of researchers were called the Digital Economy Research Team (DERT). The research study’s objective was to understand how secondary English Language Arts curriculum could be transformed to reflect new digital and multiliteracies. As part of the DERT project, professional artists listed with Culture PEI were recruited to mentor grade 10 students to gain digital and multiliteracies through project-based learning. Culture PEI is a not-for-profit sector council that represents professionals from the field of Creative Arts on Prince Edward Island.

The DERT project spanned five grade 10 classes from two high schools, and four English Language Arts classes from three community college sites in Prince Edward Island. At the high schools, the DERT’s innovative multiliteracies curriculum was implemented instead of the traditional Inquiry Unit of the English Writing 421 course. At the three community college sites, the new curriculum was taught instead of the traditional English Writing 621 course. As designed by researchers of the DERT project, a project-based learning approach was adopted and students worked in small groups on creative arts-based project with professional artists. Students and professional artists met twice a week through a nine-week semester beginning in October 2013. As a research assistant, I collected a subset of the data from the overall DERT project from one of the high schools, and was permitted to use it for this study.
Through a videoethnography guided in theoretical and procedural understanding by videoethnographers, such as Fels (2010), Goldman, Pea, Barron and Denny (2014), Knoblauch, Tuma and Schnettler (2015), and Pink (2007), and members of my supervisory team (Dr. S. Wiebe, Dr. R. MacDonald, and Dr. P. Gouzouasis), I analysed videorecordings of the two groups selected for this study along with field notes from the semester long PBL, and drew some findings. The videoethnography was also informed by my positionality as an outsider observing insiders (Herr & Anderson, 2015, pp. 40–41) by virtue of my role as a research assistant in the DERT project, and my personal role as a parent of a high school student. This chapter presents the analysis and findings.

**Analysis**

For analysis, video recordings were viewed chronologically and sequentially. Though video recording was regularly undertaken on the same two days every week, mentors had the flexibility to schedule different days to work with their groups of students. That flexibility was reflected as irregular time gaps between two video recordings. The inconsistent time gaps between subsequent recordings is being mentioned here only to explain how it came to be, as those differences did not necessarily hamper analysis.

To begin analysis, multiple viewings were undertaken in order to grasp the entire happenings, and understand the whole, and refrain from analysing just the parts. Multiple viewings were undertaken to prevent arbitrary analysis of video clips that recorded short instances and moments in time that revealed but a small piece of the entire reality. Multiple viewings allowed for the writing of a thick description. Those thick descriptions laid out the context, and detailed significant interactions, both verbal and non-verbal, and lent towards a layered understanding of the phenomenon under study. The thick descriptions contributed to undertaking metareflection and led to deeper understanding of how students expressed agentic engagement within project-based learning.
Metareflection is “reflected reflection”, a process that is inherently critical and involves considerate reflection of the knowledge process (Georgiev & Nagai, 2011, p. 49). Such reflection on the perspectives drawn from initial reflection attempts to be neutral as much as it is pensive and critical. As part of the thoughtful and critical metareflection process, I looked back at classroom observations, my reflections, and field notes and checked my perspectives and assumptions. Through metareflection, I tried to make transparent what I was thinking, what shaped my thinking (Centre for the Enhancement of Learning and Teaching, 2017). I also reflected on previous reflections to uncover how I came to make the observations noted in my field notes, and later, how I drew the analysis for this study.

The process of metareflection also revealed stop moments that compelled attention. These stop moments are “moments of opportunity” and “action-sites of learning,” when one is called to mindful attention to reflect on what matters (Fels, 2010, pp. 2–3). These stop moments challenge one to listen and to engage, and serve to inform, challenge, and transform pedagogical practice (Fels, 2016). For Fels (2010),

A stop is a moment that tugs on our sleeve, a moment that arrests our habits of engagement, a moment within which horizons shift, and we experience our situation anew. A stop occurs when we come to see or experience things, events, or relationships from a different perspective or understanding; a stop is a moment that calls us to mindful awareness…[These stop moments] … call our attention to the gap; moments that interrupt, that provoke new questioning, that evoke response, reflection, and hopefully, lead to meaningful and moral action. (p. 4)

Those stop moments helped me realize that nonverbal expressions of looking away and looking uninterested may at times be subtle expressions of agency. Non-verbal gestures that appeared to indicate disengagement may be students’ agentic expression to convey strong yet silent dissent without appearing to misbehave. Also, smiles and laughter could sometimes be
mechanically induced to instinctively follow instructions or expectations of the teacher or peer, and thus be indicative of students’ agentic engagement at the cusp of the recipient and partnership stage. Similarly, leaning forward did not always mean a show of interest as the individual concerned was at times merely bending forward in response to a specific instruction.

The DERT Project Launch

On October 22, 2013 the cultural experts or mentors, as the professional artists were often referred to, presented a portfolio of their work in a variety of creative arts’ genres and shared their professional and personal experiences with students from two classes in one high school in PEI. The possible genres presented to students as options for projects of their choice ranged from stop-motion animation, short film, music video, stage play, poetic stories, thriller novel, children’s storybook, mural painting, and acrylic painting, to sock puppetry. After the portfolio presentation by the professional creative art experts, students had an opportunity to learn about their prospective mentor’s motivations and passions, and explore possibilities of projects that they could undertake under the guidance and mentorship of the creative expert they were grouped with. Students worked with mentors in small groups throughout one semester as part of the Inquiry unit of the English Writing 421 course within their English Language Arts curriculum.

The first group presented here is of five students, who worked with their mentor on a stage play. The second group also had five students and they worked with their mentor on a music video. The first group’s project was non-digital in nature, and the second group’s project involved use of digital technologies. For practical reasons the first group is termed the stage play group, and the second group is referred to as the music video group. All participants, both students and mentors, were assigned pseudonyms for reasons of confidentiality and anonymity in keeping with the research ethics approval.
Stage Play Group

The group working on a stage play comprised five girls—Kylee, Shianna, Deanne, Brianna, and Virginia. Their mentor was Mabel, a professional theatre and television artist. The five girls were close friends who preferred to work with each other as a group. All five girls loved to dance, and their first preference for a project was to do a choreographed dance with another mentor, who had the requisite expertise. However, too many students had expressed interest to work with that mentor, and so the class teacher had to step in to divide students fairly equally among the five mentors. Thus, though ideally within the PBL initiated by the DERT project, students could choose their mentor and project, the five girls in the stage play group had their mentor and project chosen for them.

October 22, 2013.

On October 22, 2013, Mabel made her presentation along with the four other professional artists who had joined the DERT project as mentors. Mabel was an experienced and renowned actor who had performed in a popular tele-series. Recordings of that tele-series are available at the local library and continue to be viewed. As part of her portfolio presentation, Mabel shared how the essence of a story lay in connecting with the audience. “Let them feel the characters,” she said [16:59–17:00]. She also offered, “Everyone has a story to tell. Not everyone knows how we want to tell that story” [21:39–21:41]. And she had mentioned earlier, “Each different way of storytelling is totally legitimate, totally fascinating, totally relatable, totally interesting” [00:15–00:17]. Further she declared, “how you tell your story changes considerably depending on the medium” [01:03–01:05].

A five member all girls group with Kylee, Shianna, Deanne, Brianna, and Virginia worked with Mabel to script, direct, and act out or create a stage play. Their script was based on a popular Hollywood movie, *Mean Girls*. Shared here is the story of the five students whose naturalistic interactions were captured through a video camera lens and through
personal observations written out as field notes. Surely, each person had their own story to tell. Their own lived experience. I asked myself, what aspects of this learning process might students have found most agentically engaging, and how they might express this in telling their stories, their lived experiences?

Stage play requires acting before a live audience. There are no retakes and no special camera tricks in a stage play to make up for or mask performance slips. None of the girls had done a stage play before, and had joined as a group because of their friendship together and, group work seemed an opportunity to be with each other. As mentioned earlier, a stage play was not the students’ genre of choice for their voice project. They had wanted to do a choreographed group dance. All five girls were close friends and had wanted to work together on a project that involved some form of dance. However, another professional artist, Cynthia, who could have trained and guided them, already had many students signed up to work with her. Then, a counter argument entered my mind. Choreography also entailed performance before a live audience with no retakes. And so, the sense of audience would be similar, irrespective of the genre in this group’s case. Viewing students’ work and interactions with Mabel from this background help us understand better the interpersonal dynamics between the students and their mentor. Might interactions with the mentor have changed had students wanted to do a stage play and if Mabel was the cultural expert of choice? Further, a second group that had been working with Mabel disintegrated and Mabel joined another professional artist to be able to show that she had students from two classes. I had tried to understand the reasons for the group’s disintegration to be able to communicate the same to the P.I. and be able to support the project process better. However, details and reasons for the group’s disintegration were quite understandably not divulged by the teacher. I am unaware if the five girls working on the stage play knew of these things. And, even if they were aware of it, might it have impacted their working together?
**October 29, 2013.**

On this day, Mabel sat around a table with the group of five girls and shared more about her life and her work. Her sharing was more detailed than the introductory portfolio presentation she had made on October 22, during the project’s launch [00:03–00:06]. Mabel spoke of her time at University when she had taken Maths as a major. Then she shared how even as a young girl she had always wanted to be a performer, and how being an actor was a career choice for her [00:08–00:10]. She narrated her favourite jaw-dropping story, of her time, working with Johnny Depp, of course, when he was a young boy [00:12–00:14]. Name dropping is a means of acquiring and sharing social capital. Here Mabel presented her social capital drawn from working with a famous Hollywood actor though it was during his not-yet-famous years. Mentors and teachers present their social and cultural capital as a means to command respect and evoke students’ interest in working with them. By narrating an incident that brought social capital to her, Mabel was also sharing this social capital with her students. For now, they in turn could tell the story of having worked with a person who worked with Johny Depp. I felt that with this story Mabel inspired an *open jaw in awe* moment. After speaking about herself, Mabel asked students their names and interests [1:15–1:18]. Later, Mabel asked students about the kind of project they would be keen on doing [1:23–1:25]. As each student spoke, Mabel maintained eye contact with them and also took the time to jot down what they were saying. Mabel was careful to allow students the freedom to share what they wanted about themselves. None of the students were pushed or coaxed in any direction, and they sat around the table with Mabel, forming a circle. These initial sharings of personal experiences, discussions, and learning about each other serve to cement person-to-person bonds and build social capital of the group. Mabel had learned something about students’ interests, but had stopped short of learning of their skills and
competencies, and students’ zones of proximal development. Mabel was a professional artist and not a trained teacher. Possibly, the lack of pedagogy related training got in the way.

**November 7, 2013.**

In the video recording from November 7, 2013, the mean girls’ group of five were seen with their mentor Mabel. The girls, Kylee, Shianna, Deanne, Brianna, and Virginia were nicknamed mean girls. As students and their mentors were assigned different classrooms or venues within the school as per availability, on this day they found themselves in a science classroom. They were working with Mabel to write their script. Three girls, Kylee, Shianna and Deanne, sat at three rectangular desks, close to Mabel, who was standing. The other two girls, Brianna and Virginia, stood far behind the table, close to the classroom wall, behind their groupmates. All five students were facing Mabel [00:04]. Not much effort was made by the Mentor to bring these two girls into a closer fold. Mabel was glancing at Brianna and Virginia now and then as she spoke, but no direct indication was made that she wanted them to be seated or join the other three girls. Possibly, this was done to give the two girls space (as no overt gesture was made by either the mentor or their peers to exclude them). About a minute and a half later [1:28], Mabel walked closer to the two girls, Brianna and Virginia, and without speaking a word, with just the use of her eyes and a smile, came back to her place in front of the group. She then wiggled her fingers, and this brought both Brianna and Virginia closer to where the other three girls were seated. While at this instance no overt gesture was made to exclude any of the two girls, later in the videorecording, Brianna made a non-verbal and earnest effort to be noticed, when she deliberately went and sat next to Mabel, with her back slightly turned against Mabel, in a subtle mark of protest, while facing Kylee, her friend, possibly, in a bid to secure some support, reached out to a plastic bottle of water beside her on the table and drank from it, more from a thirst to have her presence acknowledged and to be noticed than a thirst for water.
Mabel was taking the lead and initiative to develop this script. She had reminded students that the essence of a good story was enshrined in the parts that were funny, and parts that made you laugh or cry. In keeping with this guidance, students focused on a few quirky instances from the movie *Mean Girls*, especially the funny instances centered around the new girl in school. The stage play script mirrored the movie, albeit with a few adaptations to Canadianize it. In the play the girl’s family had moved to Canada from Africa. The script focussed on social dynamics with the entry of a new and different person within an established social circle of popular girls in high school. In the scene discussed here, the mean girls confronted the new girl about her skin colour and the company she kept. One of their concerns was about why she was white when she came from Africa. “So,” one of the mean girls asked her quite ignorantly, yet directly, “If you are from Africa, then why are you white?” Further, the new girl was observed to be hanging out with someone who was considered a lesbian. These questions brought to the fore real life stereotyping and prejudices around personal and sexual identities.

Mabel provided suggestions for the script and gave tips in acting. “You shouldn’t be hanging out with her at all, she, she’s a …” [00:09–00:11]. Mabel suggested that students come up with a word that is not lesbian at all, but just sounds like the word lesbian [00:12–00:14]. “Yeah, she’s a foreigner,” blurted Shianna and looked towards Kylee for support, who merely nodded and said, “Yeah.” Mabel ignored these as distractions and refocused on the task at hand. She then simplified the task and suggested students find a word that rhymed with she’s a ‘le’ or ‘lesb’ [00:15–00:16]. Kylee caught on and suggested, “She’s Lebanese.” At this point [00:17], all five girls in the group burst out laughing and then looked at Mabel for an OK and for further directions as she glanced at them. Mabel offered a suggestion, and said, “She’s a Lebanese” with emphasis on the word ‘a’ for added effect—implying how small details were necessary to keep the rhyme. Some of the students around
her nodded slowly, to indicate they understood [00:20–00:22]. Mabel went on to act it out and elbowed an imaginary person next to her and whispered out loud, “She’s a lesbian” [00:25]. Shianna got the cue, and said, “God! Karen [character’s name], you are so stupid, she’s a lesbian” [00:27–00:29]. Mabel offered, “You don’t even have to say it, you just have to look it.” Shianne was quick to act this out too: God! Karen you are so stupid” [00:30–00:32]. Kylee and the other girls (except Virginia) laughed out loud [00:33–00:36]. Kylee said, “You should say that though, you are so mean” [00:39]. I guess she was referring to Shianna’s character in the stage play and not in real life. Either way, Shianna and Kylee were good friends in real life. Friendship presents possibilities of accepting comments and feedback. Mabel took the opportunity to emphasize that the script belonged to the students and said, “If you guys like that, we’ll keep that for sure” [00:41–00:43]. By saying this, she allowed students to feel that this was an exercise in collaborative script writing and possibly encouraged them to think further and continue their efforts. “Do you want me to write that down?” asked Kylee. “Yes, write that down,” replied Mabel, emphasising what the students had just learned, “You loved the movie because it made you laugh” [00:45–00:47]. When students undertake a new task, adequate encouragement by mentors/teachers is positive reinforcement for them, enabling them to continue and even heighten efforts. Mabel used this as a teachable moment and said, “Keep it light and funny” [00:45].

About a quarter of a minute earlier, just as Kylee and Shianna laughed at the way the word lesbian was mistakenly yet purposefully for the script, voiced out as Lebanese, Brianna, one of the students standing against the wall said, “I love it” [00:36]. And Virginia, the student next to Brianna, nodded in agreement [00:39]. But, Brianna’s comment went unheard, and Virginia’s gesture too went almost unnoticed (by both the mentor and the three other students). All through this video clip, Brianna and Virginia remained standing against the wall and while they seemed eager to participate, they were not drawn into the script
writing exercise by either the mentor or their peers. Possibly there was unintended neglect, for it would be in neither’s interest to leave group members unacknowledged. Whether unintended or unconsciously allowed, non-acknowledgement may result in students feeling the loss of self-worth and can result in agency reduction.

Kylee seemed all enthused and suggested more dialogues, and at the same time, looked to Mabel for approval. Kylee had volunteered to write down dialogues as they were being decided. She had her three-ring file binder open and was making corrections to some already written dialogues [1:06]. Mabel repeated the agreed upon dialogue in a whisper for Kylee to write down, and Shianna repeated the same loudly, “God, you’re so pretty Karen, why are you hanging out with Denise? She… she’s a Lebanese [1:12–1:14]. All four girls laughed again, while Kylee was seriously penning down the dialogue. Mabel reminded the group again that the things that made you laugh are what they’d want to look for [1:34]. “Find the funny parts,” she stressed …”Coz it gets kind of serious later and that’s kind of fine [1:37–1:39].

Kylee took suggestions from Mabel about whether they should include dialogues about Africa. Mabel encouraged her to include them and both of them discussed possibilities [2:00–2:02]. By this time Brianna and Virginia had joined the other three girls in response to a gesture by Mabel. And Shianna, Deanne, Brianna and Virginia began chatting amongst themselves, while Kylee discussed dialogue possibilities with Mabel. I wondered why the four girls were not brought into the discussion on dialogues by Mabel. Possibly she had a valid reason for not doing so. Possibly, she wanted to give them space.

Shianna glanced at Mabel as if to make sure this was how she wanted things to proceed. Mabel took the cue and said, “Let me have my gals again,” and brought the file binder with the script to the centre of the table while saying, “Read it, so that …” All five girls gather around the script and seem intently attentive. Virginia reads out what she thinks
is her dialogue, but is cut short by Mabel as she felt the dialogue had been altered while reading [3:20]. Shianna gives it a try and reads a chunk of the dialogue [3:20–3:22]. Mabel didn’t agree with one part in the dialogue and there was a discussion between Mabel and Shianna on whether to keep the part about mentioning “Africa,” as the new girl had moved in from Africa [4:03–4:06]. During this discussion, Virginia looked on, but Brianna looked away as she could see no part for herself [4:08]. Mabel continued the discussion while at the same time assigning roles and dialogues as Kylee requested for a role to be assigned to Deanne [4:33]. After hearing some dialogues being read, Mabel gave a role and some dialogues to Deanne and explained the character to her and the group [4:45–4:49]. At this point, Brianna turned her gaze back to the group and specifically to Mabel [4:50]. Mabel continued to dish out dialogues and assigning these dialogues and roles to the four girls in front of her—Kylee, Shianna, Deanne, and Virginia [5:35–5:39]. Brianna who stood as the only person in a second row behind Kylee and Shianna pouted and looked sad, but went unnoticed by her groupmates and Mabel [5:40]. A few seconds later, Brianna hung her head down and shook it slowly [5:49–5:50]. Brianna was standing directly in front of Mabel as she held the chair on which Kylee was sitting [5:51]. Mabel was concentrating on the binder with the script while discussing dialogues and did not notice Brianna as she stepped slightly away from the chair she was holding, with her face still sunken and her eyes looking downward, possibly at the script binder that held everyone’s attention [6:04]. About half a minute later [6:49], Brianna walked deliberately and quickly towards Mabel, pulled a chair for herself and picked up one of the bottled water bottles from the table [6:52]. Shianna and Virginia gave her a glance as if to say, why are you doing this? or why are you disturbing the flow of discussion? [6:53]. Brianna ignored the glances much as she was being ignored by the rest. She leaned her right hand on the table and sipped some water [6:58–7:00]. Brianna’s actions seemed somewhat defiant and desperate, yet valiant actions to seek their
mentor’s attention, possibly to get a role and be assigned some dialogue. The mentor however, appeared focused on the task of scripting the stage play.

**November 12, 2013.**

The setting on this day was of a classroom where Mabel was meeting her mean girls. Mabel could be seen moving her position from standing to sitting, and back to standing throughout the video. She seemed calm when she was sitting and seemed eager to move things along when she was standing. Perhaps her posture coincided with what she was feeling and how she was placed (or how she thought students were placed) with the process and progress of the stage play.

Mabel acted out a locker scene and focussed on Deanne, Brianna, and Virginia, who were seated to her left [00:01–00:16]. Only Virginia gave the slightest of nods with a slight smile while Deanne and Brianna simply looked on. Mabel moved her gaze to Kylee and Shianna to her right and inquired about the script. “Well who has it written lately?” [00:23] asked Mabel, indicating there had been some work done by students on their script in recent days. “You’ve done some writing, and you did some writing too?” asked Mabel of Kylee and Shianna. Kylee replied in the negative and said her writing was not good, and indicated that as a reason why she had not written. Shianna had the file with the script ready at hand. Yet, Mabel requested Deanne to take out a pencil and write down some of the lines they were discussing at the time [00:42–00:45]. Surely Mabel had seen that Shianna had the script ready and was willing to write. But possibly Mabel wanted Deanne to get involved and had not thought it was important to explain to the other girls the rationale of her choice. Mabel was in-charge and was asserting her role. The students responded to her directorial instructions. Deanne asked Mabel to repeat what she narrated about a scene. Mabel repeated slowly for Deanne’s benefit so she could write down the narrated scene [00:22–00:24]. The scene was of the new girl keeping her clothes in the locker. Mabel was making pointed
efforts to elicit participation from students by giving them specific tasks and indicating what was required of them in a clear manner.

The three students to Mabel’s left, Deanne, Brianna, and Virginia, bore no smiles on their faces. Their participation seemed mechanical and appeared to be simply a learned response. Students’ agentic engagement requires more thoughtful, deliberate, constructive, and critical actions. Often in school, students operate from a learned behaviour of following instructions. Dispositions expressing obedience to authority helps keep them out of trouble and enables them to stay safe within the school system. Agentic engagement of students can be understood as being at the partnership stage when students follow instructions enthusiastically and feel that their actions lead to the achievement of their learning outcomes. In such situations, students are aware of and are in agreement with figures of authority in their school, on what needs to be done, and they deliberately follow through on instructions. At the partnership stage of agentic engagement, students and teachers take on a more or less equal stake for themselves in meeting students’ learning outcomes. While agentic engagement at this stage is beneficial for both students and teachers as it moves them along the learning trajectory, more emphasis is placed on meeting set outcomes than exploring newer possibilities.

Even so, Kylee and Shianna appeared to take more initiative. Their participation can be understood at the ownership stage of agentic engagement. Kylee seemed to be the person who had seen the popular Hollywood movie *Mean Girls*, or at least she was the one who remembered more of the movie than the other four girls and Mabel. Now and then she narrated scenes from the movie to her peers and Mabel. Kylee’s narrations helped the group script their stage play and plan how each scene should unfold. From those instances reflecting initiative, Kylee’s participation can be viewed as being at the ownership stage. At the ownership stage of agentic engagement, students more than willingly follow instructions.
Students at the ownership stage of agentic engagement participate actively, take initiative, demonstrate perseverance, and put in extra effort without being asked to do so by teachers.

By virtue of their professional positions within the social institution of formal education, teachers, or institutional agents have both pedagogical and social responsibilities. Thus, besides their formal curricular responsibilities, institutional agents are informally tasked with student habitus and capital enhancement. These pedagogical responsibilities and their implications are discussed further in the next chapter.

**November 14, 2013.**

The setting on this day was of a classroom with all five students sitting around six desks that had been placed together to form a U shape. Mabel was standing beside them talking animatedly. Only her lip movements were observable, and the sometimes smiling faces of the five students, as this videoclip had no audio recording. What was observable, however, was Mabel referring to a drawing on the whiteboard of a theatre stage with the right and left wings to either sides.

**November 28, 2013.**

There were two video recordings from this date. Both video recordings had been recorded a few seconds apart, indicating the possibility of a technical error. The first video recording was a couple of minutes long and the second video recording was about a minute in duration. In both the video recordings the mentor was absent. In the first video recording from this day, all five girls were present—Kylee, Shianna, Deanne, Virginia, and Brianna—and were sitting at a rectangular table in the library. The students’ chatter and laughter could be heard though words were not clearly audible. Possibly they were trying to stay quiet as they were in the library. Three of the students had open file folders in front of them and they were reading from it. The students were reading lyrics to rap songs. Brianna took the lead and sang lyrics from their script to the tune, “What does the fox say?” Kylee looked on for
two seconds and then got an idea. She pulled out her smartphone and placed it on record mode close to Brianna [1:54–1:59]. Virginia who was sitting opposite Brianna and Kylee liked the idea and followed suit with her smartphone. In taking initiative with singing the rap tune, Brianna was participating at the ownership stage of agentic engagement. Kylee also took initiative and acted on an idea she had, and thus she too was participating at the ownership stage of agentic engagement. Virginia followed Kylee’s action of recording with the smartphone, yet she did it on her own without being asked to do so, and her participation as well can be understood as being at the ownership stage of agentic engagement. On further observation of the difference in the kinds of initiative taken by Kylee and Virginia, one could infer that there could be sub-stages within the stages of agentic engagement with the extent of effort invested in actions that are characteristic of each stage of agentic engagement. Both students record Brianna’s singing for about a minute until Brianna’s voice breaks off, more due to the lyrics and less due to the quality of her voice [2:02–2:22]. Kylee plays the recording and smiles at Brianna to let Brianna decide for herself what she’d like to do. Brianna gets the message behind Kylee’s smile and puts her head down, but she smiles and is not dejected [2:29]. Friendship provides the support needed to both express and receive criticism in a supportive and safe environment. Friendship also affords the capacity to take risks, experience failure, and possibly provides the strength and courage to try again. The kind and quality of relationships among friends provides peer scaffolding that can help students in learning.

The setting of the second videorecording was the same as the first. Kylee, Sheanna, Deanne, and Brianna—were sitting at the rectangular table in the library; Virginia was absent. The four girls were working silently, possibly as they were in the library. I was standing beside the video camera, and as I observed their silent work, asked what they were doing. “We have to do a rap for each of our characters, and we have to like make it to the
melody of “What does the fox say?” [00:15–00:17]. Shianna then told Kylee that she had something, and asked Kylee if she could sing it out? [00:23–00:25]. By seeking to contribute, taking the initiative, and by offering to sing the lyrics she had written, Shianna was participating at the ownership stage of agentic engagement. Kylee responded with an enthusiastic, “Yeah.” Kylee often emerged as the group leader, and here she was being involved at the ownership stage of agentic engagement when she was supporting and encouraging participation of a group member. The lyrics were barely audible and Shianna stopped singing when she realized she may need to work further on her piece. When the group was silent again, I checked with the students where in their play might the rap songs be used. Kylee, Shianna, and Brianna responded that their rap songs might be used in the last scene of their play [00:35–00:37].

December 3, 2013.

On December 3, the five mean girls met up in the school auditorium to work on their stage play. All five girls (Kylee, Shianna, Deanne, Brianna, and Virginia) were sitting close together. Their mentor, Mabel was absent. Yet, all five students seemed seriously engrossed with the task at hand—singing self-written lyrics to a rap tune they intended to use in the stage play. Brianna sang her part as two others recorded her singing on their smartphones, and everyone kept beat together. Brianna sang, “What does Denise say? Denise say….” to the tune of the popular rap song, What does the fox say? This rap song was popular in 2013 and I remember it being sung quite often by teens, including my daughter. After Brianna rapped for about 10 seconds, she realized the lyrics and tune were not in sync, and her four groupmates burst out laughing. As observed earlier, it is okay when friends laugh. The social capital afforded by friendship can bear laughter, teasing, and criticism.

Kylee took the lyrics sheet and tried to rap. In a matter of two seconds, Kylee and her group laughed, seemingly at the difficulty to sync the lyrics and the tune [00:35–00:37]. And
after trying to rap some more [00:43–00:48] Kylee returned the lyrics sheet to Brianna and
Brianna tried a different rap tune that seemed to work a bit better as the pitch was lower and
the beat was slower [00:55–00:59]. Shianna was coaxed by her groupmates to give it a try.
She agreed and browsed through her lyrics sheet [1:02]. Kylee offered to get a suitable beat
from her smartphone. During the time Kylee searched her smartphone, Brianna initiated, and
Deanne and Virginia joined in to give a rap tune of their own [1:10–1:13]. Kylee and
Shianne joined in, too. And soon, Shianne started singing to the rap beat [1:30–1:39].
Virginia, with her back to the camera, had also been searching for tunes on her smartphone.
She got up spontaneously and started rapping loudly, much to the surprise of her group
members [1:40–1:42]. All group members cheered and clapped and kept beat together as
Shianna sang the lyrics, and, towards the end, let out a victory wail of sorts with her hands up
in the air in rap style. Here was a stop moment. Let’s call it the rap song stop moment. The
other four girls joined in and the victory wail just got louder [1:43–2:00]. Virginia had also
been recording and played the recording for everyone’s benefit. All five students maintained
eye contact with one another, had smiles on their faces that broadened and gave way to
laughter at times. All five of them were attentive to, and supportive of each other throughout
this practice session. Here was an instance of all five students (Kylee, Shianna, Deanne,
Brianna, and Virginia) participating at the ownership stage of agentic engagement where
their actions arose spontaneously and contributed towards furthering their learning goal. All
the girls appeared highly motivated as they made effort to select the right rap beat to go
with their lyrics. Observing the girls work with such intense seriousness made me appreciate
the space students had to express their voice through the Voice Project as the DERT project
was named at the high school. But then, because the rap was left out of the stage play, my
thoughts are drawn again to the idea of voice and the much-related notion of student agency,
choice and decision-making. Might the students have had the opportunity to decide which
song, and how and where to use the song(s) within their stage play? Was it their decision at all in the first place to use songs? Did they want to do a dance sequence or a choreography in the play? I asked those questions knowing that the students had wanted to do a choreography for their voice project. Other questions I asked myself were around factors that prompted Virginia to express a disposition so different from what could be observed in previous videos. In previous videos she had appeared silent and almost withdrawn, and in this video she got up spontaneously, kept beat and also rapped with style. Was it the task at hand? Maybe she liked rap, and maybe she liked to make rap moves. Or was it the absence of the mentor, or perhaps a combination of both in the presence of her friends that made her comfortable enough to express herself freely? Those questions were relevant also for Brianna who was the first to rap, spontaneously, loudly and confidently, undisturbed by the smiles and laughs of her groupmates. Brianna too was participating at the ownership stage of agentic engagement, something that seemed a distant possibility for her in the earlier video recordings.

Brianna and Virginia were highly involved on this day. They expressed agentic engagement at the ownership stage when they were with their friends in the absence of the mentor. Quite evidently, their bond of friendship with the group scaffolded them and afforded them social capital that enabled their participation at the ownership stage of agentic engagement.

If schools are fields according to Bourdieu, then classes can be understood as microfields. Similarly, when classes are understood as microcosms of society, cliques and groups within the school can be understood as nanocosms. Within fields and microfields (as also within microcosms and nanocosms), expression of habitus and agency is dependent on the social factors and the anchorage afforded by acknowledged capital. Social capital
brought about by the presence of other individuals through their human factor, and one’s relationship or standing with the other individuals plays an important role.

When students have opportunities to learn using activities that are similar to their lives outside school, there is space for heightened agentic engagement. When students were rapping to tunes they decided on, they were engaged at the highest stage or the ownership stage of agentic engagement. Quite evidently, rap music was part of these students’ everyday out-of-school life experiences; thus engagement with choosing a suitable rap tune came easily, and they were able to maintain agentic engagement at the ownership stage in the absence of an adult figure offering mentorship or prompts. Contrary to the students’ earlier dispositions where three among them appeared to lack confidence, and the other two frequently referred to their mentor for prompts and approval, here all five the students showed capability and confidence to take independent decisions and to act on their decisions. Might the mentor have missed recognizing and, therefore, missed acknowledging the students’ capabilities, interests, and more importantly, zones of proximal development? Might the mentor’s lack of professional pedagogical training have been responsible for her mentoring skills or lack thereof? Possibly the mentor was only doing what she believed was the best thing to do; move the stage play project along by providing active leadership and direction instead of facilitation. Might there be an unofficial norm of “the teacher is always right” within the formal educational system, and might this influence students to respond with obedience and silence? Might teachers/mentors also be feeling the pressure to be right and expect obedience from students? And surrounded by this hegemonic influence, might there be unconscious suppression and subversion of students’ voices, channeling them instead through adult approved voices? In the absence of active elicitation of students’ voices and the deliberate facilitation of its expression, teachers can be understood as being complicit in suppression and subversion of students’ voices, despite the consciously and
overtly expressed motive being to highlight and celebrate students’ voices. As a reminder to myself, this project was titled “The Voice Project” and aimed at promoting and showcasing students’ voices. Yet possibly the mentors were feeling the pressure to present an almost professional project, befitting their years of experience as they might have perceived that the project would be seen by a wide audience as a reflection of the mentor’s expertise rather than students’ efforts alone. Possibly the mentors were also in need to showcase their mentored projects in the hope of getting more professional contracts. For creative arts professionals, their work is their reference.

December 10, 2013.

Kylee, Shianna, Deanne, and Brianna sat around a table in their classroom reading their script. Virginia seemed absent, but came in towards the end of the videorecording. Their ELA teacher (visible in the background) was seated at her teacher’s table and was looking intently at her computer monitor. There were muffled noises from other student groups in the classroom, but no other students were visible in the video clip. Despite the surrounding distractions, the four students, Kylee, Shianna, Deanne, and Brianna were focusing intently on their copies of the script [00:01–00:03]. Shianna was reading aloud [00:04]. She tripped on a word and all the three others giggled. “Denise was exited,” she read, “why would she be exited?” She asked with an innocent voice and close to confused face [00:09–00:11] and this caused the laughter. Deanne recognised that there was a typographical error and said, “excited” [00:13]. Kylee understood why Shianna tripped on the word, and said, “It should be in brackets” drawing brackets in the air with her fingers and searching for a pen/pencil to make the correction. “She should have put brackets there,” Kylee said again [00:14–00:16]. “I’ll do it” volunteered Deanne and promptly picked up a sharpened pencil from the table [00:17]. Both Deanne and Kylee participated at the ownership stage of agentic engagement by noticing what was required and taking action to move their project and their learning
along. At this point the fifth member of the group, Virginia joined the table. Kylee made light of the entire episode and brought back the rap tune they used to practice, “What does Denise say? Denise say I’m excited!” The girls appeared to recognise that the word was indeed say, and not says or said. They also appeared to subtly acknowledge that it was acceptable to ignore grammar slightly in rap lyrics. Yet, the rap tune did not go well with the words, and the girls laughed again [00:18–00:20]. They continued to chat a bit around the script and what should be included, but with more than two persons talking simultaneously, the conversations were barely distinct. Virginia subtly called the group to order and prompted Brianna who played the role of Denise to read her part [00:39–00:40]. Virginia took the initiative and gently drew the group back on course. This prompted me to think about how Bourdieuan concepts of field, habitus, and social capital are influenced by the agents present in a field. In particular, my thoughts focussed on how the currency, recognition and expression of social capital within a field is affected by even the presence or absence of particular agents.

The students read their parts in monotones, with little to no expression. Shianna broke the boredom creeping in and asked if she could be the narrator [2:08]. The other girls agreed. Here, Shianna had taken initiative and by taking the lead, she was participating at the ownership stage of agentic engagement. Deanne, too, had shown leadership and initiative by recognizing why Shianna had tripped over the word “exited” and gave a constructive suggestion that the word should in fact be “excited.” Deanne exhibited agentic engagement at the ownership stage when she recognized the typographical error, and agentic engagement at the partnership stage when she accepted Kylee’s suggestion of placing the word excited within brackets. The other girls were participating at the partnership stage of agentic engagement too. Now, the girls seemed to take on their dialogues seriously and read with feeling for a few minutes until Deanne tripped over a few words, and the whole group burst
into laughter again [3:34]. They came to a part in the scene where the new girl was being
asked to hang out with the popular girls, and the new girl was unsure if she should or should
not accept the invitation. And, Virginia (who played the character of the new girl in the play)
read, “Sure, I’d love to” [3:43]. At this point, Brianna pointed out that there should be a
question mark at the end, as the new girl’s response was to be more like a doubtful question
than an assertive affirmative response. Virginia looked a bit unsure of how that would
sound. And so, Shianna jumped in with “I’d love to?” [3:47]. Her dialogue delivery with an
uncertain questioning ring towards the end, received approving nods from the others and an
enthusiastic high-five from Brianna [3:49]. Once again, Shianna took initiative and
participated at the ownership stage of agentic engagement. Here, Virginia too had
participated at the ownership stage of agentic engagement by identifying the need for a
question mark in the sentence. It might be interpreted as just a common and simple
punctuation mark, but Virginia had pointed out something that helped to enhance the way the
script was read and understood, and in a way how their stage play project would be
understood. I wondered again why Shianna’s and Virginia’s agentic engagement was at the
highest stage when they were with their friends, and at the lowest stage during all the
sessions where their mentor was present. The thought of students’ agentic engagement being
influenced not just by the field and the social capital, but also the agents in the field came to
mind. From these incidents, one may infer that the field was influenced by the actors or
agents present therein and similarly the presentation of a person’s social capital was also
influenced by the actors present at the time. More laughter from the girls could be heard as
they wound up their work (possibly for a break) and shifted their attention to another project
in the classroom—an oil painting of Beyoncé on canvas.
December 19, 2013.

Kylee, Shianna, and Brianna were standing on one end of the stage in their school cafeteria. Mabel’s voice could be heard from the other end. “Ok. So we’ll say the entrance will be from back here” she said, possibly indicating the rear entrance to the stage on the side where she was standing [00:13]. Again, Mabel was in charge and playing out her directorial role. I wondered if students had been offered the opportunity to decide how they would have liked to have the stage set or enact the script? Was there a preconceived understanding that the students might have little to contribute as they had no previous experience with stage play? Might students have wanted the opportunity to experiment and learn? Possibly; yes, possibly, no. How could one be certain?

Kylee, the student who was usually most attentive to Mabel, wore a distant look and was also actually looking elsewhere [00:10–00:13]. On December 12, 2013, i.e. the previous week, Kylee and three other students had asked Mabel if they could arrange for snacks during their practice time, as they had observed students working with another mentor were having snacks. Kylee suggested the possibility of budgeting for snacks as this was how the other group had obtained permission to have snacks during their practice time. However, Mabel had turned down Kylee’s request even though she knew Kylee spoke for the entire group. Instead, Mabel offered lamely that the other group got snacks only when they were actually shooting their short film, and kind of encouraged her students to detail out the dialogues and costumes for the characters in their play. When a research assistant on the DERT project made some snacks available to the students, Mabel ordered the students to first focus on work, and think of snacks only after they did some work, with strong emphasis on the word, work. Might students have felt disappointed and discouraged by the turning down of a simple request? Might students have felt they were not being treated equally, as one group of students got to enjoy snacks and they were denied at first, and at a later time were
asked to wait until they completed some work? Might there be the possibility of small instances and happenings having greater than intended impact on students’ agentic engagement?

Mabel seemed intently focussed on the task at hand and other budgetary considerations she had in mind. She drew students’ attention to the fact that they would need to go to an actual theatre to practice their stage play and indicated she may need budgetary provisions to book the theatre for that practice. Possibly students felt unimportant and upset as their request for snacks, which to them seemed a genuine request, had been turned down. Possibly they felt they were not taken care of, and the negation of their simple request adversely affected their enthusiasm and their agentic engagement.

Mabel walked towards her students to get their attention and they too closed in, and when she asked one of the students to read the first few lines, they all focussed on the script in their hands [00:20–00:23]. Might the students be exhibiting agentic engagement at the recipient stage? Possibly, yes. Here the students were obedient as required by their mentor, yet their faces lacked the light and smile when they were rapping. Mabel was trying to act out a locker scene for the students to observe and follow and looked around for suitable props as she asked the students, “Do you have benches in your locker rooms?” [1:07–1:09]. Mabel drew a flat bench in the air with fluid hand movements. The bench available to them on the stage in the school cafeteria, however, had a back-rest, and Mabel was looking for a flat bench much like the ones seen in locker rooms, so as to be able to straddle over one’s foot. Mable acted out how she wanted Brianna to sit, and where she wanted Shianna to stand with the actions she wanted her to do—stuff things in her bag and be ready to stuff them in the locker [1:24–1:26]. Mabel called on Brianna and Shianna to take their places, and they came over to where Mabel was standing. Brianna sat on one end of the bench, and Shianna stood behind the other end as Mabel had modeled [1:41–1:43]. Mabel also gave Shianna a few
lines that sounded nasty as that was the character she was supposed to portray in the stage play. Both girls nodded and wrote down the dialogue. Later Kylee was called in as well, and all three girls were given specific and precise instructions of where to enter from, where to stand, how to stand or sit, and what to say [5:29–5:31]. Clearly, Mabel had been a stage artist for many years and was undoubtedly an expert in her field. However, mentoring students and promoting their agentic engagement appeared to need pedagogical expertise. While Mabel was clear in what she wanted to see and hear acted out, her students seemed a bit unclear. They appeared to be trying to meet her expectations but felt ill-equipped to do so. Possibly students needed more time and space to try out for themselves, possibly fail at times, and succeed at still other times. This opportunity for experimenting and trying out various possibilities seemed to be lacking when Mabel was with the group. The pedagogical style that was adopted seemed to be positioned a bit away and out of sync with students’ zones of proximal development. In responding promptly to Mabel’s script and acting oriented instructions, Kylee, Shianna and Brianna were participating at the cusp of the partnership stage of agentic engagement and the recipient stage of agentic engagement. One may argue that the students’ agentic engagement was weighing more towards the recipient stage of agentic engagement, as they were simply following instructions. Their participation here stands in contrast to their involvement at the ownership stage of agentic engagement earlier on November 28.

When the girls and their mentor met in October to write their script, Kylee had been offering suggestions for lines, as she had seen and remembered scenes from *Mean Girls*, the popular Hollywood movie on which this stage play was based. Might she not have been able to suggest or figure out the actions they had to do, especially if she had appropriate scaffolding, and time and space availability? Students were capable of editing their script, as observed earlier, when they corrected exited to excited and added a question mark where it
had been missed out. Possibly the students were not responding fast enough or accurately enough to their mentor’s expectation, but given the way they performed when their mentor was absent, they may have been able to come up with actions. My thoughts went to question how the stage play might have turned out if the students had been encouraged to decide on their own dialogues, and to act out these dialogues.

From my field notes, I drew on the important part of the ending for the stage play. Once again, students’ requests were turned down by their mentor. I was surprised, as earlier on November 07, their mentor had assured them of keeping in the script lines that they liked. My thoughts went to what might have changed? The students had suggested multiple options for the ending, and in all there were about ten possibilities. Yet, none of their suggestions were accepted by their mentor. I did not venture into asking the students what kinds of endings they had suggested, for this was not the most significant point of the discussion. What struck me was that students’ ideas were being ignored and negated, and this amounted to negating their stakeholdership in their learning process. Might Mabel have felt pressured by forces outside her personal self, possibly her perception of what was required of her by the DERT project, the school, the audience, and by experts in the creative arts industry? Might these pressures from various quarters have served to prioritize and highlight the expert’s voice while discounting students’ voice? These and other questions relating to variabilities influencing students’ agentic engagement, especially pedagogical and mentoring strategies came to mind.

The videorecordings of this group ended on December 12, 2013. However, students and their mentor continued to work together to complete their stage play, which was presented in January 2014 along with all the other projects to a larger audience including parents.
**Music Video Group**

The second group in this study also comprised five students—Daniel, Bob, Joe, Nyle, and Garry. Along with their mentor, Sarah, the five boys worked on a music video.

**October 22, 2013.**

On October 22, Sarah presented her portfolio as did the other four mentors. Sarah connected with the students by sharing her social capital as an ex-student of the school: saying that she still remembers the classroom she was in, that her father was a Physics teacher there (she also asks students if anyone of them has a parent who is a teacher in the school), and that her son had been to this high school too [1:05–1:07]. While presenting her portfolio and offering herself as a mentor, Sarah first positioned herself in relation to students and their experiences in school by sharing her personal life, and then she positioned herself as a unique professional, different from the other professionals students had met that day. “I think I’m a little different from the others who presented [their portfolios] here today, because I’m a very classical storyteller, I think” [2:20–2:21]. She then drew commonalities between herself and the other creative arts experts and said, “Everything we all do comes from story, from writing” [2:23]. And then she brought her presentation to the aim of the DERT project, “And what you are trying to do is to give voice to your story” [2:26]. She focussed back on herself and said, “I’ve been telling stories from the time I was very small,” [2:36] and shared how it came naturally to her.

She went on to outline her professional career and shared how she had gone to University and done the usual and then became a Museum curator [4:24–4:26]. In her work, she enjoyed most the stories of the people, and one day she had her lucky break, and she was hired to work on a popular tele-series. That tele-series, set in 1896, based on a story by noted writer Lucy Montgomery, was in conjunction with Sarah’s work as a curator. Sarah’s work was fast-paced as she needed to think on her feet and make sure all the actors had their
accessories and the set had all the required props [5:35–5:37]. For Sarah, this job was her introduction to the world of television, and historically, it was her introduction to the Province of PEI, her province of birth and the place where she spent much of her lifetime. While she enjoyed television, she knew she wanted to move into making films [06:09–06:11]. So, she called up people whom she knew from her past work in PEI and made her first film—a traditional short film [07:13–07:15]. She still felt proud of it, as it was telecast on CBC. Sarah showed the class an excerpt of the film and mentioned how the film was classical and was made without special effects [8:10–8:30]. As students watched this clip, she explained how she took the different shots—sometimes having to lie on the ground to focus the camera [13:16–13:19]. Sarah was using her portfolio presentation as a teachable moment. Presentation of these finer details about her work was possibly intended to inspire and enthuse students who might be interested in the genres of work she was describing.

Next, Sarah picked up a copy of a feature film script she had prepared and held it up for students to see. Here she introduced how every great film needs a great script. She then passed it around for students to glance through. Later, she showed short clips of another film and a documentary she had made explaining how the film and documentary used different kinds of shots [14:12–14:16]. Next, she shared her passion for writing and mentioned she had three books that were available online, and a fourth one in print. Sarah looked in the direction of the girls in the classroom and said, her work might interest the girls more, as her genre of choice was love stories and offered to mentor any student who may have similar interests [14:30–14:35]. Sarah summed up her presentation by offering students the possibility of working on a book, a short film, a music video or maybe even a documentary [5:11–5:13].
October 29, 2013.

Sarah sat at a table in a circle with her group of students—Daniel, Bob, Joe, Nyle, and Garry—in the library and asked the students their names and interests [00:40–00:42]. She took notes as each student spoke, maintained eye contact, kept a smile throughout the conversation, and intermittently nodded in acknowledgement. Next, she asked them about the kind of music they liked, specifically, if they liked country music [00:53–00:55]. Two boys mentioned they liked country music [1:40–1:41]. So, Sarah inquired if they had heard of or if they had been to a recent country music concert and the students replied in the negative. Possibly this probe question from Sarah was meant to figure out the extent of experience students had with this genre of music. Sarah’s next question was around what students liked about the music videos they preferred. Garry mentioned that he liked videos with a lot of special effects [02:35]. She probed Garry to learn what kinds of special effects interested him, and if the effects were visual? He replied that he liked the combination of sounds [02:44–02:46]. Sarah then proceeded to learn if students had edited music before, seeking to know the kinds of technical skills available with her group. Joe said he had done some editing, and Sarah went on to understand the kind of equipment Joe had used—if it was a PC or a Mac [05:55–05:59]. Learning about students’ interests and experiences is an important strategy to understand students’ habitus and capital and design facilitation attuned to students’ zones of proximal development. Sarah’s strategy, contrasts with Mabel’s strategy, which concentrated on sharing her own past experiences in a bid to showcase her social capital. Sarah on the other hand, spoke less of her own accomplishments as she had done this already on the day of the DERT project launch.

After students had shared their interests in music and their experiences with music video editing, Sarah proceeded to give students some information. She shared with students the different kinds of cameras and types of shots that were available and also gave students a
AGENTIC ENGAGEMENT WITHIN PROJECT-BASED LEARNING

web address if they’d like to do a bit of research [06:45–06:50]. Now and then Sarah paused the conversation and paraphrased what a student had communicated just to ensure she had understood correctly. She also asked probing questions to elicit more information where needed [06:55–06:57]. Sarah went on to explain the two main categories of music videos—one being concept videos [7:29–7:31]. From 7:31–8:26, the audio quality sounded poor and the voice sounded muffled in the video recording, and Sarah’s words on the second main category of music videos were inaudible. Later, Sarah acknowledged that her students may have more ideas than she did on technology and technological infusion in music and invited students to bring their interests and knowledge to the project [8:26–8:28]. She also acknowledged the wide array of interests the students had in music—from rap, and country, to metal—and offered that given their interests a very exciting music video could be made [08:58–9:00]. Towards the end, Sarah proceeded to give the students some homework. She acknowledged that the students were really busy, and they had sports and other homework to attend to after school, and assured them the work she assigned would not be time intensive. She asked students to bring back examples of the kind of music they liked, not necessarily the weblinks, but names of two of their favourite music videos—the name of the band and the name of the song [9:01–9:03]. Throughout her conversation with the students, Sarah gave them time and space to respond, so none of the students felt rushed or pushed to speak. Allowing time and space for students to speak what they had in mind can help students feel safe in the group and this feeling of safety can enable them to take initiative, take risks, experiment and innovate, and express agentic engagement at the higher stages—partnership stage of agentic engagement and ownership stage of agentic engagement.

October 31, 2013.

Sarah and her students—Daniel, Bob, Joe, Nyle, and Garry—sat in a classroom facing a computer monitor. Sarah showed students a photograph and a script online and invited
them to examine it. She explained the technical aspects of a script, and how a scene was described in a script [00:40–00:41]. Next, she asked students to examine television shows regarding the kinds of shots, and the description that would go in the script—how it would look on a page [01:21–01:23]. All five students listened to her intently. They were able to relate to the task given to them as it involved activities from their everyday life and it was an opportunity for authentic learning. Sarah acknowledged that script writing sounded challenging and also promised that once they got the hang of it, they would find it interesting [1:42–1:44]. Next she pulled up another example and talked with her students about a popular film and its script [2:21–2:23]. Apparently, students had not heard of the film, and so Sarah moved to a third example. From the script Sarah accessed online, she pointed to descriptors of the scene—it is set in a school hallway, and the scene is shot outdoors in daylight [2:33–2:35]. Next she proceeded to read the kind of attire worn by two characters in the script [2:47–2:50]. Sarah explained that descriptions of the dress worn by the character immediately tells about the setting or where they are and the climate [03:00–03:01]. Sarah described the basic elements of a script and a film, and informed students of the different types of shots—over-shoulder, close up, etc. [3:20–3:23]. She then turned to the students and got them to write something: “Let’s write something together first, and then I’m gonna get you each to write your own story,” she said [3:37–3:40]. “We won’t bother with the title, at this point,” she told them [3:55–3:56]. Sarah had moved away from the computer monitor now and was seated in a circle around a table with her students. She turned to Nyle seated at her extreme left and invited him to start, with a slug line for their collective story [4:00–4:02]. Interestingly, Sarah chose to begin with the student who spoke the least, though the student who appeared most active and attentive in her group—Daniel, sat to her extreme right. Sarah asked Nyle to give a slug line, and explained what it would entail, “Where would it be set?” She asked and tried to increase the excitement factor by saying, “Give a
slug line for the first fictional movie we are going to make together as a group” [4:07–4:09].
Nyle tried and what he said sounded like the opening description of a scene—“Exterior, in
the field, through the day” he said, almost in a monotone [4:10–4:12]. “OK. That’s a good
start!” cheered Sarah and explained to students how they’d write it for a film script. “Write
ext.,” she said and went on to add, “One would not use the full word, e x t dot would be
written for exterior she said, and for field, just write f-i-e-l-d followed by a hyphen and d-a-y,
so it’ll be like field-day to describe the rest of the setting” [4:13–4:17]. Nyle and the other
students wrote this down. Here Nyle and the other four students were participating at the
partnership stage of engagement. They had received guidance and specific instructions and
they willingly put into action what their mentor asked them to do. The students were
conscious of the fact that they were learning script writing for short filmmaking. If the
mentor had felt the need to specifically instruct the students to write down what she was
saying, and if the students had complied only after receiving the particular instruction, their
participation would have been considered at the recipient stage of agentic engagement.

“The next thing we’d want,” Sarah said, “would be the first line of action.” She turned
to Garry for this and explained the significance of the first line. “It would tell the director
what the first couple of shots would be. For example,” she said, “if your first line was the
dog bounced into the field after a ball, then the first couple of shots would be of the ball
bouncing into the field, and then the dog’s paw, and then the dog’s tail wagging.” She
explained how one needed to visualize each shot while writing the first line and advised,
“Keep it simple, and keep it in terms of each shot” [5:50–5:53]. “A man walks into a field,”
said Garry [5:42]. Now that sentence did meet the requirement of being simple and
describing how the shot would be. The other students smiled and looked at Sarah as she
smiled. “OK,” she said. “And, before you write that down, I’m going to ask you some
specific questions. Do we know anything about this man? Is he your main character?”
Sarah kept the questions coming to elicit details on the man mentioned by Garry in his opening line, “Is he in his thirties? Is he a businessman?” she asked [5:57–5:59]. “So, do I give the description too?” asked Garry for clarification [6:02–6:04]. Here Garry was participating at the ownership stage of agentic engagement where he was a primary stakeholder in his learning process. He had followed Sarah’s initial guidelines for coming up with an opening line, and now he sought clarifications on the added input offered by his mentor. Garry was taking the initiative to enhance his learning (and his peers’ learning). Evidently, Garry was able to ask these questions of a mentor as he felt safe with his mentor and with his group. He would not have been able to seek any clarification if he had felt that his asking the question might have had adverse repercussions or that he might have been laughed at, or questioned in return. Sarah smiled seemingly in acknowledgement and appreciation, and suggested, “Let’s give him a name, and let’s give him a description [6:15–6:17]. Here, instead of giving the answer or stating what could be good names and descriptions for the main character, Sarah was asking students to suggest names and provide a description. Also, she did not give students an instruction or tell them what to do, the words she used “let’s give…” promoted participation instead of domestication, which might be expected with the use of words that might mean “do this or that.” Sarah referred back to an online script she had showed the students, and said “Let’s give him a first name and a last name such as John Teller, and then his age, and then just a basic description of what kind of...not just what he looks like or what he is wearing, but what kind of person he is too [6:35–6:37]. She looked at Garry and nodded, “That’s a lot to wrap into an opening line” [6:38]. “I was thinking of the same thing,” said Garry [6:40–6:42]. Sarah continued, “We already know he is walking into …” At this point, Daniel, sitting at Sarah’s extreme right hand, yawned, and Joe sitting next to him looked a bit withdrawn with his wrist to his chin [6:44]. Possibly both students felt bored as they were yet to get their turn. Possibly there were other
reasons. Sarah continued to converse with the group, and with Garry in particular. She suggested a couple of interesting details: “Maybe he was walking by himself, or maybe he was walking with a horse, or perhaps even riding a horse” and added, “So you can give us whatever information you want to about this guy” [6:55–6:57]. Then Sarah pointed towards Bob (the third student to her left, whose face was hidden from the camera at this point) and said, “You have to give us the next couple of lines” [7:05–7:06]. As she spoke, Sarah turned towards Daniel and Joe and smiled, and they smiled back [7:25–7:27]. That gesture of Sarah appeared like a silent acknowledgement that she knew they were there, and seemed to assure them they would get their turn soon.

Throughout the conversation and guided group activity on this day, Sarah was conscious of and was operating in the students’ zones of proximal development. She was aware of the students’ zones of proximal development from past conversations with them where she learned about their knowledge and experience with music videos and short films. The tasks she set before them were just within their reach with a little support from her end, and with each step she was moving them deeper into understanding the basics of filmmaking as a whole, through the requisite parts—the slug line, script, and shots. Moving from one student to the other from her left-hand corner, Sarah was assigning responsibilities sequentially according to where the students sat at the table, and the tasks assigned followed logical steps in filmmaking. Sarah seemed to have considered students’ individual capacities while allocating responsibilities. And Sarah appeared to have considered each student’s level of development specific to the envisaged project at hand. She had asked students specific questions during their past meetings to get to know their interests, skills and prior experiences to be able to understand their technical skill levels, and possibly also understand students’ zones of proximal development in the fields of music video and filmmaking.
Similarity of interest in this group of students regarding music and film-making seemed to add to group cohesiveness and their ability to support each other—though this was done silently most of the time. There was also some degree of similarity among the students with regards to their lack of experience in editing music and video as only one of them, Daniel, had attempted some video editing work. Such sharing of interests and experiences, can contribute to group bonding and social capital. In the first case study, long-standing friendship and the familiarity it afforded them contributed to group bonding.

**November 12, 2013.**

On this day, Sarah was seated at a table with her five students—Daniel, Bob, Joe, Nyle, and Garry—in a classroom. Sarah showed the students a blank storyboard sheet and explained what it was used for. Sarah had begun this session with the end in mind. She had wanted students to think about the kinds of shots they would need for their story, and where and how each shot would be placed in the storyboard. “Before we do storyboarding, you have to be very prepared, and decide how you are going to frame,” said Sarah [4:52–4:53]. Sarah assigned students to go out and take two-to-three photographs with their cellphones and gave them five minutes for the task [5:27–5:29]. Allowing for a reasonable amount of time for the task helped students organize what they had to do and how they would do it. As one of the students did not have a cell phone, Sarah gave him hers. In doing so, Sarah made herself more accessible to the students and in making herself accessible she made the group environment safer for students’ agentic engagement [6:11–6:13]. Use of cellphones to take photographs was an activity students undertook in their social out of school lives, and none of them expressed any difficulty or confusion with the task. In fact, the group of students appeared happy and sounded chirpy as they got up from their seats and headed outside their classroom. Designing activities that reflect students’ everyday lives outside the classroom is pedagogically strategic as it allows for spontaneous expression of agentic engagement.
Overall, Sarah’s mentoring strategies on this day included instructions that were few and clear; tasks that were simple and broken into achievable steps given students’ zones of proximal development, timelines that were short and appropriate to the task at hand, using technological devices that were readily available. The task of taking photographs with smartphones mirrored students’ everyday lives and allowed for their participation at the ownership stage of agentic engagement as they were confident about where to go. Possibly they also had ideas on what photos to take even as they were still learning how to frame shots and design their storyboard. Influencing students’ agentic engagement were mentoring strategies used by Sarah in terms of the participation eliciting terms, such as “let us” and “we”, as such terms promoted a sense of ‘community.’

December 12, 2013.

The setting in this video recording was the school’s science lab. On this day, students were shooting their music video guided by their mentor. Also present in the lab were two volunteer actors, Anita and Joy, from another grade 10 class, and a professional two-member film crew arranged by Sarah. This video opened with Daniel finalizing the film crew’s camera’s placement.

He was clearly participating at the ownership stage of agentic engagement when he stood in front of one of the tables at the far end of the lab where the two actors had positioned themselves [0:01–0:03]. Daniel focussed intently with his head slightly bent downwards and moved his hands in the air to position the camera shot [0:04–0:06]. He seemed to be speaking to himself as he moved his hands up and down, possibly to measure the height of the shot, and then he moved his hands around him in two semi-circles, possibly framing both ends of the shot [0:07–0:09]. He seemed intent, possibly visualising what would fit into the camera lens’ frame. He then went to bring the cameraperson who was also present in the lab, and gave him instructions on where the camera needed to be positioned [0:10–0:14].
Garry was behind the camera. Once the camera was placed, Sarah came to help Garry focus the camera as he looked as if he could do with some expert assistance with the almost formidable looking professional film camera [0:25–0:27]. Here Garry was participating at the partnership stage of agentic engagement and was keenly taking in what Sarah had to offer. Daniel in the meantime had picked up a box and a one gallon can of what appeared to be baking soda and vinegar and brought these to the two actors stationed at the lab table [0:25–0:27]. He placed the box and can on the lab table and asked one of the actors, “What do you need like from there? There are some beakers up there.” [0:31–0:34]. Daniel turned around to respond to something Sarah asked, and Joy immediately stepped in to help. She walked towards where the beakers were kept possibly to bring back a couple of them [0:33–0:34]. Joy understood what was required for the scene and took the initiative to arrange for props that would be needed for the scene. Once Daniel had finished discussing the scene and the shot with Sarah, he too went to pick out beakers [0:53–0:55]. Anita came out from behind the table too and appreciated one of the beakers and said, “That’s a good one, that’s very sciency” and proceeded to pick out some beakers [01:09–01:11]. Anita was acting spontaneously, without prompts and her involvement can also be understood as being at the ownership stage of agentic engagement.

At this point, my thoughts went to the three other students in Sarah’s group. They were not seen in the video. Might they have been assigned other roles? A camera-person from CBC Television came into the video camera’s frame and could be observed recording Sarah’s interactions with Garry [1:12–1:14]. Sarah continued to focus the camera and brought Garry to view how she had set it up. Garry nodded in agreement and followed Sarah’s guidance [1:36]. On his part, Daniel picked up two small beakers and handed them over to Anita [1:56], and then focused his camera and prepared his shot from behind the professional camera [2:13–2:15]. More video recordings were undertaken on this day and
particularly of this group as the film shooting was being undertaken by students, their mentor, Sarah, and the professional crew, and also because a person from the CBC Television network was recording the DERT project for telecast on CBC Compass.

As I observed Daniel and Garry work with Sarah, my thoughts went again to Bob, Noel, and Nyle. Those three students had not yet been seen in the video recording done on that day. Earlier, I had wondered about the possibility of the students being assigned other roles, but that didn’t seem to have happened. Might they have not taken a role, or been encouraged to take a role? Could they have been gently encouraged to take a role? There seemed to be potential and possibility for them to be involved as actors in the music video. However, Anita and Joy had taken on these roles. Both these girls were from another class, and seemed to have been invited to act in the music video.

During my field observations, I did recall a discussion in the group about the need for actors. Group members had shied away from the possibility and suggested inviting actors from other classes instead. Possibly, that is how Anita and Joy came to act in this music video. Might there not have been other roles that the three boys could have taken?

Now, my thoughts went to the roles of the two professional film crew members. One person (Carl) held the long black mic and confirmed that sound was rolling when called on to say so by the director, and the second person (Cynthia) wrote down names of shots, called the place or set to order, and gave the signal to begin shooting. Evidently, Carl held professional equipment that he may not have wanted students to handle. But the role of Cynthia, seemed more substitutable. Why then had none of the students stepped into that role? During my field observations, there was one instance when one of the students took on this film crew’s role. Though nervous, I thought the student did quite well considering he was trying something new for the first time. Might this student have continued if he had been given the needed encouragement?
Coming back to the video recording from December 12, Daniel walked over to Cynthia and informed her that the scene they were going to shoot had changed. He clarified that while the main aspects of the scene remained the same, the science experiments that the students would undertake and the chemical reactions they would try out had changed [2:33–2:35]. He was referring to the baking soda and vinegar reaction that the two actors would be performing during this day’s shoot.

Bob walked into the camera’s focus, and Carl asked him if more safety glasses could be found. Bob moved fast as he seemed to know exactly where to find them [3:58]. Bob might have responded to Carl’s suggestion of getting safety glasses for the two actors, but he also showed promptness and initiative when he brought back the safety glasses for them.

The stages of agentic engagement can be understood as points on a continuum of agency expression with porous borders that overlap slightly and build on the earlier/prior stage. Bob was participating at the fluid intersection between the partnership and ownership stage of agentic engagement, and if one were to assign his performance to any one stage, his performance would be placed at the ownership stage of agentic engagement as he took some decisions himself, such as the decision on the number of safety glasses to bring.

Daniel walked over to Anita and Joy and explained how the scene was set up. “The beakers would be set on the table, and then you’d walk in,” he said [4:42–4:44]. Both Anita and Joy looked excited about the scene they were about to act out. They put on their gloves and safety glasses as Daniel looked on with interest from the side [4:54–4:56]. During this time, the video camera panned very briefly and focussed on Joe and Nyle, who were sitting by the side of the table at one end of the lab. They looked happy and were out-of-the-frame participants during the music video shoot. Just then, Sarah called on the two boys and suggested they do some tasks. Might Sarah have called on the boys since the video camera had brought them into focus? Might Sarah too have noticed the boys only when the video
camera spanned and brought them into focus, or might there have been some other reason? Might she have felt that eventually, the DERT research team might take notice of the two boys? Both Joe and Nyle got up promptly and walked over to where the professional camera was set [5:35–5:37].

Exactly what roles they took on could not be ascertained as neither was in the videorecording. Both boys seemed happy to be called upon to do some tasks. They got up and walked over briskly when called by Sarah. Might the two students have just been waiting to have some roles and tasks assigned to them? In waiting to be assigned roles and tasks, both Joe and Nyle had participated at the recipient stage or the pre-agentic stage of engagement. Yet, they might not have been the only persons responsible for their stage of agentic engagement. In new situations, such as this music video shooting, spontaneity, and initiative comes slowly, and the practiced behaviour of following instructions comes more naturally as the practiced behaviour is embedded in students’ habitus and informs their actions. Encouragement and purposive action by the teacher/mentor can bring about changes to the practiced behaviour of students as new expectations and responses thereof get accumulated in their habitus to influence their future actions.

Sarah checked with Daniel on the framing of the shot. “The camera will stay, and Anita and Joy will walk into the frame,” said Daniel [6:33–6:35]. Daniel had taken his directorial role very seriously and seemed to be enjoying it as well. Nyle was encouraged by Sarah to take on Cynthia’s role and call the set to order [7:05]. He looked unsure, and Cynthia assured him, “You can do anything” [7:07]. With those words Cynthia was handing over charge, offering freedom of choice, scope for some decision-making, and also expressing confidence in Nyle to carry out the task successfully. Evidently this was the first time for Nyle. He stepped forward and held the clapperboard, but chose to hold one end of it. Cynthia held the other end. Quite clearly Nyle was nervous and did not want to mess
things up. He was being cautious even with a small task such as holding the clapperboard and calling the set to order. Then on cue, he said, “Quiet on set.” Cynthia prompted him to speak louder, and he spoke louder, “Quiet on set” [7:11]. This time, his voice had a definite authoritative ring to it. Sarah encouraged Nyle to say the other routine commands as well [7:12]. And Nyle asked, “Sound rolling?” Carl replied, “Rolling.” “Camera rolling?” asked Nyle. “Rolling,” replied Garry. “Scene Three. Take One,” said Nyle, in his newly found commanding tone and moved away as required to let the scene be filmed and called out “Action” [7:23–7:26]. This was the cue for Anita and Joy, who walked in and took their assigned spots at the lab table and started working on their experiment. Anita poured vinegar into a flask and Joy added baking soda. They gasped when the flask bubbled over, and looked excited at a successful experiment [7:27–7:29]. Daniel suggested that this scene be taken again and said, “This time instead of looking scared, they look happy and high five each other after the experiment” [7:30–7:32]. Garry, who was behind the camera filming the scene, nodded in agreement. Both Daniel and Garry were deeply involved and were participating at the ownership stage of agentic engagement, where they felt they were the primary stakeholders and were making important decisions for their group project.

Sarah called the crew and students to order and said, “Take two, everybody, same scene” [7:34]. In project-based learning, the teacher/mentor often adopts a facilitative role, but is also ever-present and takes the lead as needed to keep the process moving along a desired trajectory. Sarah’s words added to the confidence of Daniel and Garry, who were in the roles of director and cameraperson.

After the table was cleaned out and made ready for the next shot, Cynthia called everyone to be ready on set. Calling everyone to order on set in preparation of a shot came easily to Cynthia as she was a professional and here her habitus was in sync with the field and the tasks she was undertaking. Sarah stepped in and encouraged Nyle to take on this role
and also asked him to hold the clapperboard Cynthia had been holding until then. The
clapperboard was used to write details of the scene and the number of takes to assist in
editing work later on.

Nyle looked happy to take on this additional role even though it was small. He held the
clapperboard with confidence. Now Nyle’s voice was automatically loud, clear and
commanding, and he needed no prompting, saying “OK everybody, quiet on set. Roll sound?
(and waited to hear the response—rolling). Roll camera? (and waited to hear the response—
rolling). Scene three, take two. Action!” he said [7:40–7:42]. Here was another stop
moment. Let us call this the clapperboard command stop moment. Clearly, Nyle had moved
onto the ownership stage of agentic engagement within a span of seconds and this movement
was facilitated by a gentle suggestion by his mentor, and by the space this allowed for his
participation.

Joe could be seen standing next to Carl, the mic person from the professional film crew
[8:20]. He was observing Nyle who was working with the white board and was calling the
set to order. My thoughts went to the lack of suggestion that he received from his mentor,
Sarah, and the lack of space he might have perceived for his participation or engagement at
higher stages. Might he too have engaged at the ownership stage of agentic engagement if
given a similar chance? Possibly, yes. Possibly, he might have needed a bit more support
and encouragement, but wouldn’t it still have been worth a try?

Daniel was playing the director. He had suggested the kind of shot he wanted and how
the scene was to be played out. Garry was comfortable behind the camera as he had it
focussed in just the right way. Their mentor, Sarah encouraged Daniel to proceed. The
actors, Anita and Joy agreed to do a re-take of the shot, especially as doing a high-five with
more enthusiasm would be better for the music video. On cue, they walked in with the
baking soda box and vinegar jug respectively and began their science experiment by pouring
vinegar in a flask, adding food colouring to the liquid, and then adding baking soda to it. The liquid in the flask bubbled over. And just as it did, Anita and Joy looked pleased with themselves, laughed out loud and high-fived each other with a triumphant, “Yay!” [9:01]. At this point Nyle called out, “Cut” [9:02]. Sarah congratulated everyone and said, “That was good, everyone.” And then, turned to Daniel and asked, “How do you feel about that, Mr. Daniel? It was good?” [9:07–9:09]. “I know,” replied Daniel, confident that he had done a good job [9:11]. Here was yet another stop moment. Let us call this one the blocking shot stop moment. Daniel had taken on the director’s role, planned the kind of shot needed along with details of the positions, dialogues, and actions of each actor, and had been able to execute his plans. Sarah then asked Daniel what other shots he’d like to do. Daniel responded quickly and articulated clearly that he’d like to do a close-up of the science experiment taking place [9:14–9:16]. “Where would you like the camera to be placed,” asked Sarah next [9:25–9:27]. Daniel mentioned that he’d like the camera to be closer and to the side of the table [9:29–9:31] and proceeded to clean up the science experiment with a paper towel.

Throughout this recording, Daniel, who was the director, and Garry, who stood behind the camera, were participating at the ownership stage of agentic engagement. Nyle and Bob also stepped into the ownership stage of agentic engagement when they were offered the opportunity and when they felt they had the space to do so. And Joe seemed to be happy helping Carl, a member of the professional crew, handle the bulky audio equipment. I asked myself if he might have wanted an opportunity to participate at the ownership stage of agentic engagement, and how he might have responded if and when such an opportunity was made available.

The videorecordings of these groups ended on December 19 and 12, 2013, respectively. However, students and their mentors continued to work together to complete their stage play
and their music video, which were presented in January 2014 along with all the other projects to a larger audience including parents.

Findings

As stated in Chapter One, this study’s purpose was to understand the expressions of high school students’ agentic engagement and variability influencing their agentic engagement within project-based learning. In achieving that purpose, these three questions were posed:

● How do high school students express agentic engagement within project-based learning?

● What variabilities influence students’ expressions of agentic engagement?

● How do modifiable environmental variabilities such as pedagogical strategies influence high school students’ agentic engagement within project-based learning?

Findings were distilled from critical stop moments that served as catalytic invitations and dares to transformative action (Fels, 2010, 2016). “Embodied within action, ... like a child’s tug on our sleeve, ... a moment that calls us to attention. Notice me, a voice whispers, this moment matters, even as the moment passes, ethereal, temporal” (Fels, 2016, p. 214).

A staged process

Expressions of students’ agentic engagement within PBL can be understood as a staged process with three identifiable stages; the ownership stage of agentic engagement, the partnership stage of agentic engagement, and the recipient stage of agentic engagement.

At the recipient stage of agentic engagement, students were following instructions robotically with little to no conscious reflection on the need to follow through on the instructions they received. The following is an example of students’ participation at the recipient or pre-agentic stage of agentic engagement. On December 12, 2013, two students,
Joe and Nyle, were sitting by the side of the table at one end of the lab, while their three other groupmates took on different roles to film their music video. Until almost five minutes into the video recording [4:54–4:56], both students sat and waited to be assigned roles. Both students sat where they were positioned, possibly believing that their role on that day were to do as they were told. They may have believed that this was their role every day in school.

At the partnership stage of agentic engagement, students were seeking and accepting suggestions and ideas offered by their mentor and peers. Interactions between students and between mentor and student included verbal and non-verbal communication. Often, suggestions and ideas were communicated through a glance, a smile, or a gesture. As an example, from the second case study, on December 12, 2013, Garry had ‘behind the camera’ responsibility. He needed to make sure the camera was focussed to take the kind of shot and film that was required for the scene being acted out. He needed to have theoretical know-how on the different types of shots that they had learned earlier with their mentor, Sarah, and operational and technical know-how to ensure the camera was filming shots as required. Once the camera was placed, Sarah came to help Garry focus it [0:25–0:27]. Garry accepted Sarah’s professional expertise and guidance with camera focus techniques, keenly observing what she was teaching. Words were not spoken between mentor and student, and Garry only nodded in agreement to acknowledge he both understood and appreciated Sarah’s guidance through the demonstration [1:36].

At the ownership stage of agentic engagement, students were involved in taking initiative, putting in extra effort and time, and offering suggestions and ideas. As an example, on December 12, 2013, in the second group, Daniel was observed throughout the entire video recording on this day to be performing the role of the director, and involved at the ownership stage of agentic engagement. In the blocking scene stop moment, Daniel suggested that the scene they had just filmed with Anita and Joy be taken again. He
instructed in a matter of fact yet polite manner that this time instead of looking scared they should look happy and high five each other after the experiment [7:30–7:32]. Daniel was taking initiative and was creating in his mind a picture of the kind of shot required, and how the scene needed to be acted out. Once he had a clear picture in his mind, Daniel was making critical decisions and providing constructive suggestions for his groups’ music video project.

**A Fluid Continuum**

Each stage of students’ agentic engagement is distinct and has distinguishable characteristics or expressions of agentic engagement, yet the stages of students’ agentic engagement are not rigid. Rather, the stages of students’ agentic engagement are interlinked in a continuum, which allows for movement from one stage another. In this study, students could often be observed participating at the cusp or overlaps of the three different stages of agentic engagement. An example is the first group’s interactions with their mentor, Mabel, on December 19, 2013. Mabel modelled the actions she expected from her students, and the three students, Kylee, Shianna and Brianna, responded promptly. They imitated Mabel with the understanding that this was what she was expecting of them. In trying to be obedient and live up to their mentor’s expectations, the students brought little to no contribution from their end. Viewed from that angle, the students’ agentic engagement was weighing more towards the recipient stage of agentic engagement, as they were simply following instructions. As they began acting their parts, the students exhibited a sense of investment in the stage play they were practicing, and a sense of enjoyment in working with each other. Even with no word spoken between them, they were supporting each other. Their investment, enjoyment, and enthusiasm, albeit covert and silent, rendered their engagement, at the cusp of the recipient stage and the partnership stages of agentic engagement.
Along the continuum of agentic engagement, there is fluidity in the movement from one stage to another. An example of students’ agentic engagement progressing from the recipient or pre-agentic stage to the partnership stage is presented here. On December 12, 2013, two students, Nyle and Joe, sat by the side of a table until nearly five minutes into the video recording without roles in the music video production their group was working on. About half a minute later [5:35–5:37], when their mentor noticed them and called, both students got up enthusiastically to take on roles their mentor decided for them. While in waiting to be assigned roles, both students were involved at the recipient stage of agentic engagement, in responding promptly, and moving briskly and enthusiastically to accept roles assigned by their mentor, both students were participating at the partnership stage.

**Stages and Sub-Stages**

The three-staged process of students’ agentic engagement can be categorized into sub-stages based on the intensity of volition expressed or invested by the student. These stages and sub-stages of agentic engagement have distinguishable characteristics, comprised of students’ interactions and expressions that vary in intensity. Depending on the extent and intensity of agentic engagement, students’ engagement can be categorized into sub-stages within each stage of agentic engagement. As an example, from the first group working on the stage play, there were two students who undertook similar actions of recording a rap song and by virtue of taking initiative, they were participating at the ownership stage of agentic engagement. The example cited here is from the rap song stop moment on November 28, 2013, when Kylee acted on an idea she had, pulled out her smartphone, and recorded Brianna singing [1:54–1:59]. Virginia also liked this idea and recorded Brianna, and was doing it on her own initiative, yet she was following Kylee’s lead in this act. Nuances in the extent of initiative and effort invested in students’ actions can contribute to students’ agentic engagement at varying sub-stages within the same stage of agentic engagement.
A Multidirectional Process

Students’ agentic engagement moves in multiple directions. At times, there was an advancement of students’ agentic engagement to a higher stage, and at other times there was a retreat to a lower stage. The significant aspect of this finding is the dynamic and fluid nature of students’ agentic engagement that highlights its propensity to change in either direction, and at the same time, stresses the need to continuously support maintenance and promotion of students’ agentic engagement. To illustrate this finding an example from the first group is presented here. The five girls (Kylee, Shianna, Deanne, Brianna, and Virginia) were participating at the ownership stage of agentic engagement when they rapped to tunes of their choice, recorded themselves and after viewing their performance made efforts to improve it. However, later in their PBL experience, they stepped back into the cusp of the recipient stage of agentic engagement and partnership stage of agentic engagement when the field they were in required simple and prompt obedient response to specific acting-related instructions from their mentor. More specifically, on December 03, 2013, all five girls were involved at the ownership stage of agentic engagement as they worked diligently in the absence of their mentor and any instructional prompts. It was the rap song stop moment. A critical stop moment occurred when Virginia, silent on all other days, broke into a spontaneous rap with actions. Yet, on following days when the students were rehearsing with their mentor, they seemed to have lapsed into the partnership stage and for some the recipient stage of agentic engagement.

Agentic Engagement and Habitus

Habitus of students accrued throughout their lives influences their agentic engagement. In the first group, Kylee was observed to be taking on the role of group leader in a natural way that did not come across as being self-imposed or self-acclaimed. Kylee was also the person who shared scenes from the film, Mean Girls on which their stage play project was
based. Affordances provided by an internal socialised disposition favouring leadership combined with experience and memory of the film contributed to Kylee’s participation at the ownership stage of agentic engagement on most days. As an example: On November 7, 2013, about half a minute into the videorecording, Kylee was heard asking, “Do you want me to write that down?” Kylee had volunteered to write dialogues instead of being directed on what to do and was exhibiting her natural leadership in which initiative plays a subtle yet strong part. This allowed their mentor Mabel to interact more with Kylee than with the rest of the group. Mabel repeated the agreed upon dialogue in a whisper for Kylee to write down. Later too, Kylee took suggestions from Mabel about whether they should include dialogues about Africa. Mabel encouraged her to include them and they discussed possibilities [2:00–2:02]. Kylee’s memory of the movie Mean Girls, and particularly the dialogues from the movie, seemed to enable her contribution to preparing a script for the group’s stage play.

A second example, is the blocking shot stop moment from the second group. Daniel was able to walk into the role of director, plan and frame shots, and make important decisions regarding camera placement, actions and dialogues of actors in the music video as a result of his internalised dispositions or habitus. Possibly, his habitus was influenced by his prior knowledge of editing videos though elementary. His confident disposition landed him the role of director and later editor of the music video project, enabling his participation at the ownership stage of agentic engagement.

**Social Capital and Agentic Engagement**

Social capital as afforded by friendship offers an environment conducive for expression of agentic engagement at the higher stages. Friendship affords students the safety to offer and receive critical feedback, experiment, take risks, take initiative, experience failure, and yet have the strength and courage to try again and not give up. As an example, from the first group, on November 28, 2013, Kylee was able to give critical feedback by playing a
recording of Brianna singing. Kylee provided this feedback without uttering a word, with just the sharing of a smile, and the message was conveyed to Brianna [2:29]. The safe and supportive circle of friendship that Brianna shared with Kylee, appeared to enable her acceptance of critical feedback. This support and encouragement experienced by Brianna allowed her to try again as observed in later videorecordings. In a second example is also from the first group, Shianna had appeared reticent and remained silent in most video clips. However, on November 03, 2013, when she was with her group of friends (in the absence of their mentor), she participated spontaneously at the ownership stage of agentic engagement by offering a constructive suggestion to correct a grammatical and typographical error in the script for the benefit of the entire group and their project.

Field Influences Agentic Engagement

The social space of the classroom can be considered a micro field within the school, and within the classroom, a group of students and their mentor can be understood as a nano-field. The socio-political dynamics that are evident in larger fields were also present in the micro field of the classroom and nano-field of students’ groups. And students’ agentic engagement is influenced by their situatedness and position within the field. As mentioned earlier, anchorage within the field is influenced by habitus and capital. Students within a nano-field that is their group shared similar social capital and this afforded trust and support allowing them to participate at higher stages of agentic engagement. When persons within a social space change, and especially when there are persons with differing social capital within a field, the agentic engagement of the individuals can alter. Take the rap song stop moment as an example. When students had the opportunity to work by themselves, the shared social capital within the nano-field provided affordances for agentic engagement at the ownership stage. And at other times, with the presence of a person with different social capital, the agentic engagement of at least some of the students lowered to the partnership
stage of agentic engagement and for some others it plummeted down to the recipient stage of agentic engagement.

In the rap song stop moment, when students were working on their stage play by themselves, Virginia and Brianna exhibited agentic engagement at the ownership stage. Yet, in all videorecorded instances of group work in the presence of their mentor, they were silent and seemed to be waiting to be called upon to participate. The presence of a person with different social capital appeared to change the dynamics within the field, and at times seemed to restrict space for expressions of agentic engagement of at least two students. One may understand that the nano-field changed with the presence of a person who held greater social capital, and that it influenced the agentic engagement of students.

Agents act in accordance with what they perceive is expected of them. When teachers work from an understanding that their role is to instruct and expect obedience, they portray these in verbal and non-verbal communication with students. Students in turn comply; drawn into a learning atmosphere that demands the teacher’s approval, and one that promotes and privileges objectified imitation over innovative creativity. And when teachers perceive their role to be facilitators of learning and promoters of student leadership, they enable students to independently and collaboratively undertake critical and creative pursuits.

**Agentic Engagement and Nature of the Task**

Nature of task at hand influenced students’ agentic engagement in three ways: First, when the nature of task mirrored students’ everyday lives; second, and in a related way, when the task seemed relevant to them in the present or foreseeable future life; and third, when the nature of tasks involved higher quality thinking, students were observed to be participating at the higher stages of agentic engagement.

As an example of the first way can be seen from the rap song stop moment, Virginia was busy with her smartphone recording Brianna’s singing, which she later played for
everyone’s benefit. Later, Virginia took initiative without a prompt or suggestion from anyone, and exhibited agentic engagement at the ownership stage. Rap music and dance were evidently part of Virginia and her friends’ everyday lives outside of school, and undertaking similar tasks within school provided allowance for their spontaneous participation at the ownership stage of agentic engagement.

An example of the second way in which nature of task influences agentic engagement is the blocking shot stop moment. Taking on the director’s role allowed Daniel to decide on the nature of shots, dialogues and actions, and be engaged at the ownership stage of agentic engagement.

Similarly, when students have opportunities to undertake higher quality thinking, they are invited to higher stages of agentic engagement. For example, when Mabel asked her students to come up with simple yet funny dialogues that would captivate the audience and make the character memorable, she had designed an activity requiring students to undertake lateral thinking and be engaged at the ownership stage.

**Peer Agentic Engagement**

Student’s agentic engagement is influenced by the collaborative and advantageous aspects of peer agency and peer agentic engagement. When students in a group are involved and participative, the energy and agency within the group are enhanced, even though students’ agentic engagement is seldom homogenous across the group and throughout the project-based learning process. As stated earlier, social capital shared among members of a group can provide affordances for expressions of agentic engagement at higher stages. Contrarily, when some students feel left out, the agency in the group is diminished. From the first group, Brianna and Virginia appeared silent and withdrawn, incapable of giving ideas, or contributing to the group as the girls and their mentor worked to create a stage play. Yet, on December 03, the rap song stop moment, gave proof of Brianna’s and Virginia’s spontaneous
creative contribution. As Brianna sang and Virginia both sang and danced to the rap tune, they felt supported by their friends, non-verbally and emotionally, through eye contact, and smiles that broadened and gave way to laughter. Brianna and Virginia’s agentic engagement had been enhanced by peer agency.

**Teacher Agency and Students’ Agentic Engagement**

There is a sense of mutuality between students’ agentic engagement and teacher agency. Given their positions of authority within the classroom, teachers are enabled to create learning environments that facilitate and support students’ agentic engagement.

In the second group, Sarah’s strategy of allowing students to decide on the kinds of shot required for each scene and the actual shooting of each scene for their music video allowed them space to think critically for themselves and take on directorial roles with expressions of agentic engagement at the ownership stage. In this group, Daniel was enabled to take on the director’s role. Similarly, when Sarah introduced websites for script writing and encouraged students to view the kinds of shots and settings in the films and serials they viewed outside of school, she was encouraging them to move to greater agentic engagement in their learning.

Social and cultural capital that teachers find themselves endowed with positions them by default with the greatest level of authority and influence within the classroom. This is not to say that teachers are free to decide on everything that happens within the classroom as they are in turn influenced by the policies of the school and district, as well as policies at the national and international level. Yet, teachers have some degree of power to decide what transpires in the classroom, and here their critical consciousness of their own agency becomes important. Along with their critical awareness, teachers also need a school environment that is conducive and supportive, as they are actors not in a vacuum but rather in a field. Teachers need the support of colleagues and Administrators within the school to be
able to navigate and negotiate well established norms, rules, and regulations, which in all probability had been in place before the teacher’s entry into the school.

**Pedagogical Factors Influence Students’ Agentic Engagement**

The kind of pedagogy adopted by the instructor influences students’ agentic engagement. Pedagogical strategies that promote student-autonomy and student self-direction, influence students’ agentic engagement positively. When pedagogical strategies are geared towards student motivation, and promote student involvement in co-construction of knowledge, students tend to participate at the higher stages of agentic engagement. Pedagogical stance and language to indicate a job well done can enhance students’ motivation and their agentic engagement. Similarly, when students see the rationale and purpose behind a task, they tend to participate at the higher stages of agentic engagement. On the other hand, pedagogical strategies that are aimed at drawing compliance often result in robotic obedience and reflect students’ agentic engagement at the recipient stage. When a controlling way is adopted to gain compliance, student-autonomy is reduced, and while students may respond by carefully following instructions, they tend to exhibit agentic engagement at the lowest stage that is the recipient or pre-agentic stage of agentic engagement.

Some examples of pedagogical strategies and subsequent expressions of students’ agentic engagement are presented here. As a first example, in the second group, when Sarah recognised Daniel’s directorial role in the blocking shot stop moment, emotionally patted him with a ‘good job’ exclamation, and asked him what he felt about the shot, she indicated her appreciation and supported Daniel’s engagement at the highest stage.

As a second example, from the same date is the clapperboard command stop moment. Sarah scaffolded Nyle, helped him gain confidence, and encouraged him to take on additional responsibilities. Aided by the pedagogical strategies, Nyle exhibited participation
at the ownership stage of agentic engagement when he called the set to order and used the clapperboard with assured confidence.

A third example is from the first group of students and their inhibited expression of agentic engagement mirroring a just-follow-instructions and do-what-I-tell-you-to-do, kind of pedagogical stance. On December 19, 2013, students were instructed to follow Mabel on dialogue delivery and actions instead of coming up with actions that would be meaningful for themselves. As a result, students felt compelled to comply with instructions and participated at the recipient stage.

**Zones of Proximal Development and Scaffolding**

The significance of pedagogical factors is emphasised with the finding that students’ zones of proximal development shifts with appropriate scaffolding. As students gain mastery over new knowledge and skills, there is a shift in what is now achievable within the realm of their capacity and competency and what can be achieved with scaffolding.

When new and seemingly complex tasks are broken up into actionable tasks through appropriate scaffolding, it seems that students are able to move to higher stages of agentic engagement. For example, in the second group, Sarah seemed to consciously offer encouragement and provide space for students to be involved in the planning and creating of the music video. In most of her group work in the initial weeks of the PBL process, Sarah sat around the table with her group of five boys (Daniel, Bob, Joe, Nyle, and Garry), and spoke in a friendly, non-authoritative voice. She maintained eye contact, offered smiles as encouragement, and gave each student space and time to participate. She broke down and simplified tasks so that each student had something achievable to do, that was new yet, not too challenging. Sarah provided exemplars along the way when she showed them her own film and presented scripts for students to view online. She explained in a simple way what the technical aspects of a script and shot were and walked each step of the way with her
students. Then, as Daniel exhibited an expansion in skill set, especially in creative thinking and directorial abilities as observed in the blocking shot stop moment, Sarah changed the nature of her scaffolding to support his growing independence and expansion in skills.

**Project-Based Learning Encourages Agentic Engagement**

Project-based learning extends affordances for students’ agentic engagement at the higher stages as both teachers and students can proceed with learning in non-traditional ways. Given the nature of PBL, mentors can adopt the role of facilitator, scaffolding greater student independence, initiative and risk-taking. Through PBL teachers can leverage students’ funds of knowledge, and facilitate their movement towards higher stages of agentic engagement. By being inquiry-based, PBL offers students opportunities to take decisions, conduct research, critique, evaluate, collaborate, and create. All those activities reflect students’ participation at the higher stages of agentic engagement. To illustrate, Sarah rarely held information providing sessions. Rather, she introduced students to resources and invited them to conduct mini research studies and come up with ideas for their music video. For the students in her group, the opportunities for exhibiting higher order thinking skills through tasks embedded in their project such as collecting information, writing the script, storyboarding, planning shots, deciding on the right piece of music, selecting actors, and creating their music video, invited them to be involved at the higher stages of agentic engagement. As a more specific example, one of the students in the second group, Daniel, had opportunities to plan the kind of shot, the actions required for the shot, when to wrap-up a shot, and sometimes also to organise re-takes. Such actions necessitating planning, critical thinking, communicating, taking risks, and making decisions, allowed Daniel to participate at the ownership stage of agentic engagement.
Digital Technologies and Multiliteracies

Although opportunities to work with digital technologies may enhance students’ digital and multiliteracies, not all opportunities may do so equally. Three aspects related to digital and multiliteracies were observed in this study. The first aspect is related to integration of digital technologies with the learning process. When there was purposeful incorporation of digital technologies in the PBL, students gained digital and multiliteracies. For example, consider happenings around the rap song stop moment. On December 3, 2013, three of the girls, Virginia, Kylee, and Deanne, were using their smartphones to select rap music, record their singing and play it back to critique and improve on their singing. Until then, they were working primarily with printed text and advancing their project with text-dominated literacies. As a second example, when students from the second group had the opportunity to work with video editing software to edit their music video, they were moving beyond traditional literacies to gain multiliteracies.

A second aspect of using digital technologies to enhance digital and multiliteracies includes familiarity and ownership. When students had the opportunity to integrate digital technologies with their project work, especially through digital technologies owned by them such as smartphones, they gained more than text-based literacies and enhanced their digital and multiliteracies. Familiarity with the digital technologies owned by them, gave students the confidence to explore, conduct trials, and use the digital technologies to advance their learning. For example, on the day of the rap song stop moment, Virginia and Kylee from the first group used their smartphones with confidence, ease, and spontaneity to select rap music, record Brianna’s singing and play it back for the group’s benefit. Similar confidence and spontaneity was absent among students from the second group when they used the professional film camera, a digital device that they did not own, to shoot their group’s music video.
A third aspect regarding developing digital and multiliteracies deals with the nature of tasks. More than the kinds of digital technologies available for use, it is the nature of actions that students are able to engage with digital technologies that enhances digital and multiliteracies. Tasks that align with higher quality thinking, and allow students to make choices, take decisions, experiment, and innovate, promote students’ agentic engagement and their digital and multiliteracies. Taking the same example from the day of the rap song stop moment, when Virginia and Kylee were engrossed with selecting the type of rap music needed and choreographing steps to go with the rap music and their self-composed rap song, they were exploring new ways to present their stage play, and in the process they were moving beyond traditional literacies.
Chapter Five: Synthesis, Implications, and Recommendations

Synthesis

A brief synthesis of the main ideas highlighted from this study’s findings are presented in this section. This study posited students’ agentic engagement as their stakeholdership as well as the expression of their voice and volition in their own and peer learning. A perspective of students as active contributors to knowledge creation invested in their educational journey through school is also significant in this study. Viewing students as agentically engaged subjects finds value in today’s increasingly networked and digitized knowledge application economy. An understanding of students as potential contributors and creators of knowledge is based on a funds of knowledge paradigm. This study builds on the long-standing belief in Western societies that education advances agency (Ecclestone, Biesta, & Hughes, 2010) and presents students’ agentic engagement as an inalienable and inextricable component in the process of learning. Other key findings from this study are that students’ agentic engagement is a dynamic, fluid, non-linear, and at times an iterative process comprised of interlinked stages—the recipient, partnership, and ownership stages of agentic engagement, and sub stages; students’ agentic engagement is influenced by environmental variabilities such as habitus, capital, and field; and modifiable environmental variabilities such as the pedagogical strategies and nature of tasks.

Being microcosms of the dominant structures of society, schools are the social universe for students. Within that social universe, frequency of contact and position of authority gives teachers a high degree of influence on students’ agentic engagement and learning. The acknowledgement and validation of each student’s individuality, capacity, and contribution serves to appreciate their funds of knowledge and positions them as stakeholders in their education. When teachers take on the role of facilitators and invite students to engage in
collaborative meaning making, the process invites students’ agentic engagement and promotes their empowerment.

Conventional ideologies in education and schooling that position students as receivers of information, and reduce learning to information accrual continue to be widespread. Pressures to showcase students’ academic success through marks obtained on standardised tests are also pervasive. Both tend to impinge on teacher agency, requiring a certain teaching to the test that objectifies and reduces students to information gatherers and reproducers. Those pressures work to curtail teacher agency and slow opportunities for students’ stakeholdership in their learning. Though curriculum documents encourage cross-disciplinary approaches, within schools subject and content specific silos dominate pedagogical efforts. Cross-disciplinary approaches can enable real time student appreciation and application of learning in school to real life situations. As shown in this study, pedagogical approaches and curricular activities within the classroom can offer space for students’ agentic engagement. Pedagogies that are inquiry-based, founded on students’ funds of knowledge, and directed towards students’ zones of proximal development, can promote students’ agentic engagement. Inquiry based pedagogies such as project-based learning afford allowances for a non-siloed approach to education that is multidisciplinary and reflective of real life. Project-based learning invites students to take on tasks that require progressively increased investment in their learning through researching, collaborating, risk-taking, innovating and creating. Those learning activities enable students’ agentic engagement at the partnership and ownership stages.

Agentically engaged students are more than physically present in school and their participation is more than mechanical obedience. By contributing to their own and peer learning by taking initiative, sharing ideas, offering suggestions, persevering, investing extra effort, and by being creative and innovative, students advance their learning to learn and
ability to apply their learning in different settings. As a result, students who have opportunities for agentic engagement graduate from high school with the habitus, social capital, skills and competencies that position them advantageously in higher education and work.

**Implications**

This study offers schools and other educational institutions a usable definition of students’ agentic engagement and a practical staged model for understanding and assessing it. Findings from this study provide a framework for an appreciation of the funds of knowledge approach to learning and the modifiable environmental variabilities such as pedagogy and nature of tasks that can promote expressions of students’ agentic engagement. As mentioned by Sharratt, Maika and Hine (2015), pedagogical efforts and “between-the-bell” activities tend to be important modifiable variabilities that influence students’ agentic engagement (p. 35). School, classroom environments, and curricular practices may be shaped by the findings of this study to maximize students’ agentic engagement. There are practice-oriented as well as policy-related implications as a result of this study, some of which are addressed in the present section.

Policy documents and curriculum guides in Canada and other parts of the world have incorporated the importance of students’ agentic engagement in education. The Organization for Economic Cooperation and Development (OECD), an organization with representation from 30 countries, that offers policy directions, emphasises the significance of developing students’ capital including their education, skills, and competencies (Keeley, 2007). Within Canada, and specifically in Prince Edward Island, the recent English Language Arts Curriculum Guide for Grade 10 (Prince Edward Island Department of Education and Early Childhood Development, 2015), and earlier documents such as the Prince Edward Island Cooperative Education Curriculum for Senior High School (Prince Edward Island
Department of Education English Programs, 2007), and still earlier the Atlantic Canada English Language Arts Curriculum Guide (Atlantic Provinces Education Program, 1997), reveal visionary attitudes towards teaching and roles of teachers and students. Each of those curriculum documents, especially the more recent ones, clearly articulates the necessity to include student voice, and privilege students’ funds of knowledge for enhanced student learning of multiliteracies. Those curriculum guides for high school also highlight the importance of scaffolding within students’ ZPD, inquiry-based learning, and curricular activities that invite student engagement at higher stages by being relevant and applicable beyond school. As an example, the Prince Edward Island English Language Arts Curriculum Guide for Grade 10 recommends the following for an effective Language Arts program:

…Teachers are able to define a learner’s immediate needs and shifting developmental status, allowing for what has already been achieved and for what the learner will be able to achieve in the future … [and allowances are made for] inquiry-based learning … —drawing on [students’] diverse backgrounds, interests, and experiences, and … opportunities to extend their learning beyond the classroom into the local, national, and international communities … (Prince Edward Island Department of Education and Early Childhood Development, 2015, p. 3).

Yet in all those documents, there is less explicit mention of how to facilitate and promote students’ agentic engagement within the classroom. There appears an expectation that students will find opportunities for agentic engagement through implementation of the curriculum, which is flexible and includes a wide range of learning avenues. However, agentic engagement of students within the classroom has been slower to keep pace with recommendations made in policy documents and curriculum guides. Changes in ideological beliefs begin to be reflected in pedagogical practice when supported with training and a conducive environment. For schools to be places that promote students’ agentic engagement,
teachers and administrative personnel need the requisite competencies and tools. Training of pre-service teachers and ongoing professional development of in-service teachers can be directed towards advancing a facilitative role for teachers and agentic engagement of students. Educational institutes and teachers who have been able to incorporate a funds of knowledge approach, scaffold students within their ZPD, and advance students’ agentic engagement have found their efforts being reflected in student learning. Some examples of real-time promotion of students’ agentic engagement within classrooms in a Canadian and North American context are given towards the end of this section.

In the realm of practice, provinces across Canada have attempted to incorporate their notions of student voice by inviting students to represent the larger student body on the board of Trustees of the District Education Boards and in student parliaments as a means towards citizenship development. Many provinces in Canada provide space for students to become (non-voting) members of the Education Board. In Ontario for example, each high school selects one student and one among them is elected to represent the district as a non-voting member of the Education board (Ontario Student Trustee Association, 2016). That student’s role is to represent issues and concerns of students from their province at the Trustee level. In Prince Edward Island students from all across the island got the opportunity to perform some legislative functions. Within PEI the Rotary students’ Parliament held in November 2016, with youth representing ministerial portfolios and a Minister for Education is an example of the province’s attempts to incorporate student voice (Stewart, 2016). Having student representation in deliberations that are traditionally conducted by adults enables a small number of representative students to give voice to their concerns, provides them with valuable experience of adult held responsibilities, and serves to build citizenship. Such exposure and experience also serves to advance student learning and applicability of learning in different real life settings. However, as those opportunities are available to only a small
number of students, such measures run the risk of tokenism with a few students being required to represent a large and diverse student population. Those steps also serve less to promote students’ agentic engagement as defined in this study.

Despite the visionary guidelines in curriculum documents, practices to promote student agency have largely remained outside the classroom and for non-mainstream subjects and activities within the classroom. When student agency is discussed within schools, the concept is brought up for non-tested subjects such as physical education, for students learning English as an additional language, and for students with learning challenges. The predominant understanding of students’ agentic engagement and expression of student voice have been restricted to space for students to express opinions and ideas freely within curricular strictures. The role of students as perceived within schools continues to promote the traditionally standard practice of memorizing subject-specific facts and ideas only to repeat them back in the same format or in the format required in tests. Creativity and innovation are also promoted, yet within teacher approved bounds. Also teaching and learning directed towards passing tests remains the dominant practice in most schools (Morse, 2013; Shanker, 2014). Teachers continue to face tremendous pressure to teach in a way that prepares students to pass tests in the various subjects such as English language arts, mathematics, and science. Students on their part are required to prove subject-specific content knowledge and less the inter-disciplinary applicability. As a result, real-life applicability of knowledge and skills and students’ agentic engagement in the learning process receive less than their due.

The increasingly digitized and networked knowledge application economy could benefit from students’ agentic engagement and cross-disciplinary learning in high schools. Students could, for example, be agentically involved with real life health concerns such as finding a cancer cure, and environmental concerns such as reducing global warming.
Notwithstanding the dearth in widespread practice to promote students’ agentic engagement, when student voice is thoughtfully integrated with curricular activities, there can be considerable benefits for students, teachers, and schools (Sutherland, 2010). Opportunities that allow students to more readily understand cross disciplinary linkages and require application of their learning to a wide range of real life concerns are being carried out by individual teachers and by a few organizations. Some of those efforts are presented below.

According to Nick Provenzano, an English teacher and technology curriculum specialist from Michigan, student voice and PBL are desirable ways to increase mental muscle and enhance students’ agentic engagement. Provenzano won the 2013 International Society for Technology in Education (ISTE). He favours encouraging students to pick a project as this gets them involved with decision making and planning, and invites their participation at the ownership stage of agentic engagement. The students decided upon and collected all the resources and tools they would need for their project—“a Raspberry Pi for the computing, a scanner for the scanning, and a 3D printer from Dremel (the 3D20) to print case designs for the Raspberry Pi.” Provenzano’s students also took initiative to receive training in design and coding to complete their project (GreyEd, 2016, SmartBlog on Education section). As this study found, students’ agentic engagement responded more to the nature of tasks and teacher’s facilitation than the teacher’s physical presence and direct instructions.

A second example is of Gail Prasad, a PhD graduate from Ontario, now working at the University of Wisconsin-Madison, who worked with students in five classes in two countries (Canadian Education Association, 2016). Operating from a funds of knowledge approach, Prasad (2016) worked with multilingual students as co-researchers and together they produced plurilingual texts using students’ first languages. Prasad situated her work on students’ funds of knowledge. Her promising research that involved students as co-
researchers earned her this year’s Pat Clifford Award for Early Career Research in Education. The award recognizes her creative work in leveraging the rich diversity among students to maximize learning for all students (Canadian Education Association, 2016).

Despite the work of educators such as Provenzano and Prasad, many teachers appear to seek reassurance that they will not be judged poorly and harshly for moving away from the front of the class, no longer visibly leading from the front. Quite often teachers are epistemologically well placed to promote students’ agentic engagement, yet everyday classroom realities present a different story (Bray, 2012). Reticence among teachers to let go of some power to invite students taking on more responsibilities is understandable given the history and widespread dominance of the practice. Working with teachers and school administrators in North America and Canada is SoundOut, a program dedicated to promoting students’ agentic engagement. The organization promotes that every student can be engaged every day, in every school (SoundOut.org, 2016). Soundout.org encourages a five step cycle of student engagement that can be undertaken with every student, by every adult, in every school, everyday – listen, validate, authorize, act, reflect (SoundOut.org, 2015). The organization encourages an understanding that students are engaged in learning both inside and outside school, and advocates for partnership with students in all areas including curriculum, assessment, and lifelong learning. Similar to the work of SoundOut, Barbara Bray advances a ten step process for promoting student engagement that emphasizes student involvement at every stage of the learning process, beginning with the planning stage, and allowing students to come up with questions for discussion. (Bray, 2012)

The work undertaken by SoundOut.org (2015, 2016), Bray (2012), as also the work done by Prasad (2016) and Provenzano (GreyEd, 2016), and the study undertaken by Sutherland (2010) corroborate findings from this study. Based on the findings of this study, some recommendations for practice include development of quality relationships between
students and among students and teachers, within the classroom, and beyond the classroom. Those quality relationships form the basis of social capital and also serve to promote student habitus. Also, provision of time for students to bond and establish quality work relationships prior to the beginning of project related and other group work can help better planning and reduce potential conflicts that take place when individual differences present themselves during the course of working together. Still further, allotting a class or two to understand and practice effective group work through videos and simulation exercises are recommended. Hosting of informal receptions where students and teachers could meet at the beginning of the academic year are other possibilities. Opportunities for teachers to work together on cross-disciplinary activities and projects can provide space for students to appreciate real life linkages and applicability of their learning.

The benefits of high school education go beyond employment prospects and economic gain to encompass personal and social well-being of individuals, communities and the nation. A case was made in Chapter Two about the high costs of students having to drop out before completing high school, and the significant costs associated with students staying disengaged through high school. This study framed students’ agentic engagement as being the most important dimension of student engagement, forwarded a holistic and clear definition of the term, focused on understanding expressions of students’ agentic engagement, and uncovered variabilities influencing student engagement.

Given the small number of research studies on students’ agentic engagement within school, this study has attempted to contribute to the gap in the body of literature on the topic of students’ agentic engagement. The practical piece of work presented in this study can aid educational institutions in promoting students’ agentic engagement in every classroom, school, and campus. Of particular interest may be how the modifiable environmental variabilities discussed in this study can become areas of more focus to enhance students’
agentic engagement. Also, with a deeper understanding of the variabilities influencing students’ agentic engagement, institutions can determine where and how to allocate limited resources. Many institutions across the nation are facing budgetary concerns and are trying to provide quality education and academic support with limited resources. Institutions undertaking training of pre-service teachers and institutions engaged in professional development of educators may find the study’s findings beneficial in designing and offering programs attuned towards enhancing students’ agentic engagement. Teachers in schools, community colleges, and institutes of higher education may find this study relevant for their own pedagogical stance, and for enhancing students’ stakeholdership in their learning.

**Recommendations for Future Research**

In the present study, I presented a deepened understanding of students’ agentic engagement within project-based learning and provided a tool for assessment of students’ agentic engagement. Both the staged model for understanding students’ agentic engagement and the assessment tool would be useful within school and other educational settings. However, as this research focused on learning of high school students within PBL, more research in this area could certainly serve to provide a better understanding of students’ agentic engagement in different learning settings. Further research aimed at standardization of a tool for assessment of students’ agentic engagement would also be beneficial. Future research could also include a longitudinal dimension to follow students in classrooms so as to document the nature of scaffolding provided by teachers and note changes in students’ zones of proximal development along with stages of students’ agentic engagement.
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Annexure A

Letter of Approval from UPEI’s Ethics Review Board

Research Exempt Review Approval Letter from UPEI’s Research Ethics Review Board

March 9, 2015

REB file #6005339

Title: A University-College-Government-Community Partnership to Transform Education for Employment in the Digital Economy

Dear Ms. Roy,

Please be advised that the UPEI Research Ethics Board has reviewed and approved your Request for Exempt Review to use the data from Dr. Sean Wiebe’s project entitled ‘A University-College-Government-Community Partnership to Transform Education for Employment in the Digital Economy.’

Thank you very much for submitting your request. Best of luck with your research!

If you have any concerns or questions about this, please feel free to contact Dr. James Moran, UPEI REB Chair (jmoran@upei.ca; x0765) or me (mknight@upei.ca; x5104).

Kind regards,

-sd-

Joy Knight

UPEI Compliance Coordinator
Annexure B

Permission letter DERT Project P.I. to use data for Ph.D. Study

Permission Letter from DERT Project P.I. to UPEI’s Research Ethics Board for use of Project Data for Doctoral Work

Ms. Joy Knight
Research Compliance & Awards Coordinator
Kelley Memorial Building, 230

22 January, 2015

Subject: Grant of permission to access and use data.

This letter is to confirm that Selvi Roy is permitted access to and use of video-data collected from a high school in Prince Edward Island. Data was collected by Selvi Roy while working as a research assistant in a research project titled, “A University-College-Government-Community Partnership to Transform Education for Employment in the Digital Economy,” (UPEI Research Ethics Application Number 6005339).

As the Principal Investigator in the research project and in my capacity as PhD Supervisor for Selvi Roy, I give her permission to access and use the video-data for her current doctoral work. In her role as research assistant in the project, Selvi recorded data in a manner that participants cannot be identified. As such the video data is de-identified. Further, informed consent was sought and obtained from all students who volunteered to participate in the research project. Please find attached to this letter, copies of the Information letter and Informed Consent Form provided to all students.

Thank you for your support.

Regards,

-sd-

Dr. Sean Wiebe
Assistant Professor
Faculty of Education
University of Prince Edward Island