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Sensory-Based Arts Education and Engagement in the Junior Classroom: Exploring Multiple Ways of Knowing and Meaning

Tracy Thomson

The University of Western Ontario

Supervisor

Dr. Rachel Heydon

The University of Western Ontario

Graduate Program in Education

A thesis submitted in partial fulfillment of the requirements for the degree in Master of Arts

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SENSORY-BASED ARTS EDUCATION AND ENGAGEMENT IN THE JUNIOR
CLASSROOM:

EXPLORING MULTIPLE WAYS OF KNOWING AND MEANING

(Thesis format: Monograph)

by

Tracy Thomson

Graduate Program in Faculty of Education

A thesis submitted in partial fulfillment

of the requirements for the degree of

Master of Arts

The School of Graduate and Postdoctoral Studies

The University of Western Ontario

London, Ontario, Canada

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Abstract

This small-scale, qualitative, exploratory case study investigated the effectiveness of holistic arts approaches in a junior classroom setting. Specifically it sought to elucidate how sensory-based arts pedagogical strategies contribute to grade six students' engagement during arts and integrated learning experiences. The study examined individual and collective responses to sensory-based arts learning in an Ontario public elementary school classroom. Through case study methodologies, observation, interviews, writing, and art samples, the study explored how students made authentic connections between their sense awareness, their arts processes and their learning. Drawing upon educational theorists such as Eisner and Dewey, the study attended to how multiple modes of experience contribute to students' learning and engagement. The project examined the value of cultivating multiple ways of making meaning and the vital role that the mind-body connection and sensory awareness can play in learning, exploring, expressing, and engaging with the world.

Keywords

Sensory-based learning, arts integration, engagement, arts pedagogy, case study, junior division, somatic learning, embodiment, mind/body connection

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I dedicate this work with love and gratitude to the life and memory of my mother, June.

Table of Contents

Abstract	ii
Acknowledgments.....	iii
Table of Contents	iv
List of Tables	viii
List of Figures	ix
List of Appendices	x
Chapter 1	1
1 Introduction	1
1.1 Statement of Problem.....	3
1.2 Background and Need.....	4
1.2.1 Problem 1: Sensory Learning and Mind/Body Awareness.....	5
1.2.2 Problem 2: Arts Programming Opportunities	5
1.2.3 Problem 3: Student Engagement.....	5
1.3 Purpose of the Study	6
1.4 Research Question	7
1.4.1 Sub-questions.....	7
1.5 Significance.....	8
1.6 Definitions.....	9
1.7 Overview of Thesis	11
Chapter 2.....	12
2 Literature Review.....	12
2.1 Sensory Learning	12
2.2 Arts Programming.....	15
2.3 Student Engagement	18

2.4 Theoretical Framework.....	20
2.5 Literature Review Summary	21
Chapter 3.....	22
3 Methods.....	22
3.1 Case Study	22
3.2 Setting	24
3.3 Participants.....	25
3.4 Intervention: Fieldwork	26
3.4.1 Collaborative Planning with the Teacher.....	27
3.4.2 Meeting the Class.....	29
3.4.3 Planning and Implementation	29
3.4.4 Chronology and Context of the Project	31
3.5 Materials: for Sensory Based Arts Lessons	40
3.6 Instruments: Data Collection Materials	41
3.7 Data Collection Methods	41
3.7.1 Teacher Interviews.....	41
3.7.2 Observation.....	43
3.7.3 Work Samples Generated by Students:.....	44
3.8 Data Analysis	45
3.8.1 Analysis of Interviews	46
3.8.2 Analysis of Observations	46
3.8.3 Analysis of Student Reflections.....	47
3.8.4 Preparing Data Analysis for Reporting.....	47
3.9 Trustworthiness.....	47
3.10 Ethical Considerations	48
Chapter 4.....	50

4	Results	50
4.1	Results: Sensory Learning	54
4.1.1	What? The Auditory Sense	55
4.1.2	A Matter of Taste: The Blueberry Meditation	61
4.1.3	The Olfactory Sense: Smell’s Like... ..	63
4.1.4	Feeling the Curriculum Through Texture	64
4.1.5	The Effects of Sensory Learning	65
4.2	Results: Arts Programming.....	67
4.2.1	Student Soundscapes.....	67
4.2.2	Moving Story: Dance.....	69
4.2.3	Drama: In Olemaun’s Shoes	73
4.2.4	Creating the Culminating Task	74
4.2.5	Sensory Learning In and Beyond the Arts Curriculum	81
4.2.6	Challenges.....	84
4.2.7	Post Research Events	85
4.3	Conclusion	89
	Chapter 5.....	91
5	Discussion	91
5.1	Discussion of Major Themes	92
5.1.1	Authentic Connection	94
5.1.2	Integration.....	95
5.1.3	Awareness through Role-Play.....	97
5.1.4	Creative Freedom and Autonomy.....	98
5.1.5	Intrinsic Motivation	99
5.1.6	Attention and Focus	100
5.1.7	Conclusion of the Major Themes.....	102

5.2 Affordances and Transferability of the Study.....	102
5.3 Contributions.....	107
5.3.1 Contributions to Students.....	110
5.3.2 Contributions to the Participating Teacher	111
5.4 Recommendations.....	111
5.4.1 Recommendations for Researchers.....	112
5.4.2 Recommendations for Teachers.....	113
5.5 Conclusion	114
References.....	116
Appendices.....	124
Curriculum Vitae	146

List of Tables

Table 3.1 Learning Experiences	33
Table 3.2 Student Work Samples.....	44
Table 4.1 Chronological Classroom Events by Sense, Subject, and Discipline	52
Table 4.2 Data Organized by Research Problems	53
Table 4.3 Students' Ideas about Sensory Learning in the Curriculum	81
Table 4.4 Emerging Themes Related to Research Problems	90

List of Figures

Figure 3.1 The Relationship of the Three Research Problems	24
Figure 4.1 Students' Partner Drawings to Communicate Events from Novel	58
Figure 4.2 Samples of Student Drawings to Music	60
Figure 4.3 Samples of Monster Drawings by Grade Six Students	61
Figure 4.4 Students' Visual Responses to Smells	64
Figure 4.5 <i>Role on the Wall</i> : Students' Collaborative, Graphic Character Analysis	71
Figure 4.6 Students Prepare Individual Stones and Poems for Collaborative Installation	75
Figure 4.7 Grade Six Students Assemble Installation	76
Figure 4.8 Detail of Installation in Progress	76
Figure 4.9 Grade Six Installation	78
Figure 4.10 Possible Ways to Envision Integrated Planning	79

List of Appendices

Appendix A: Letter of Information.....	124
Appendix B: Assent Letter.....	127
Appendix C: Parent Permission Letter	128
Appendix D: Email Script for Recruitment	129
Appendix E: Ethics Approval	130
Appendix F: Diagnostic	131
Appendix G: Lesson: A Matter of Taste.....	133
Appendix H: Lesson: The Olfactory Sense: Smells Like... ..	136
Appendix I: Lesson: Feeling the Curriculum.....	138
Appendix J: Classroom Observation Template	139
Appendix K: Interview One Protocol	141
Appendix L: Interview Two Protocol	142
Appendix M: Interview Three Protocol.....	144

Chapter 1

1 Introduction

This study explores the potential of sensory-based arts pedagogies to contribute to students' learning, engagement, and meaning making. It further investigates how opportunities for learning and engagement can be structured and positioned to provide relevant and meaningful learning opportunities for students in the junior grades (i.e., grades 4, 5, and 6).

The current culture of elementary education places much importance and emphasis on grades and scores that are generated by testing in particular areas of the curriculum. One drawback is that measures of learning and success in specific areas provide little insight into students' capabilities, interests, or potential in other areas of the curriculum. Results from standardized testing often drive top-down policy changes that widen the disparity between what and how students learn and what is mandated. Students who may not experience a particular version of success may lose interest and motivation if the opportunities for them to learn and demonstrate their understanding are too limited and specific, or if the work does not seem relevant. Many educators recognize that students are individuals who learn and express their understanding in a variety of ways, that they bring a wealth of experience and background to their education, and that they need to feel engaged in their learning processes.

This research focuses on student engagement. I draw upon my experience as a classroom teacher, as a dance, drama, and visual arts specialist, and as an arts instructional leader. In these roles I have observed high levels of engagement when students are able to make authentic connections between their schoolwork and their lives. Students at all stages of their schooling need opportunities to experience their learning fully, personally, creatively, and holistically. Pedagogy that encourages students to explore and express in multiple and divergent ways helps them feel successful, included, challenged, and engaged. Teaching with the senses in mind can be an effective way to engage students and encourage a strong sense of self. I believe it is especially important for students in the upper elementary grades to expand their awareness and draw upon a range of experiences, interests, and skills so they can make more informed

choices. Students may be better prepared and confident facing the various challenges of adolescence if they have developed their abilities to connect to their sensory responses.

This exploratory case study examines individual and collective responses to sensory-based arts learning in an Ontario classroom. The project highlights the vital role that the senses and mind-body awareness play in providing opportunities for students to learn and make meaning in multiple ways. The study contributes to research in holistic education and arts education¹ by examining the value of cultivating multiple ways of learning and making meaning through the senses during creative and critical arts processes.

This small-scale qualitative study investigates students' responses to sensory based arts opportunities in the classroom and explores how students make connections between their senses and self (*mind-body*) awareness, arts processes, learning, and meaning making (Amann, 2003; Jarvis & Lewis, 2010; Willard, 2010). Throughout the study the term mind-body is used to describe integration of intellectual, emotional and physical attention (Mehling, Wrubel, Daubenmier, Price, Kerr, Silow, Gopisetty, & Stewart, 2011).

This research studies the effectiveness of holistic arts pedagogies in a junior classroom setting. Specifically the study seeks to elucidate how *sensory-based arts pedagogies* may or may not contribute to grade six students' *engagement* during arts and integrated learning experiences. In the study the term sensory-based arts pedagogies refers to instructional strategies and events that explicitly create opportunities for the activation of the learners' visual, auditory, tactile, olfactory, taste, kinesthetic, vestibular, interoceptive, and proprioceptive senses. The term student engagement includes but is not limited to interest, attention, perceived importance, efficacy, relevance, and physical, emotional, and social connection (Marzano & Pickering, 2011). The study attends to how multiple modes of exploration and expression contribute to student engagement.

¹ Arts education: Given the context of public education in Ontario, the study will follow the 2009 Ontario Curriculum, Grades 1-8, arts expectations. Arts education refers to Dance, Drama, Music and Visual & Media Arts.

1.1 Statement of Problem

Sensory-based arts pedagogies offer opportunities for students to be engaged. Many students in contemporary times have access to multiple communication channels that offer immediate facts, information, and simulated experiences but there is often little time to process the significance of the content or critically assess the meaning (Ministry of Education, 2009). In this climate it makes sense for students' learning to involve the whole person so they actively connect to their physical bodies. "Such learning is vital for communication, understanding, and intellectual and emotional growth... in an age when a plethora of information is available instantaneously" (Ministry of Education, 2009, p.5). A sensory-based arts approach to the curriculum can not only democratize the learning experience for students who might not have access to technology, it can also allow students to connect their learning with what they brought to school: their bodies.

In arts programming, there are numerable factors that challenge today's educators. Generally teachers face increasing demands with less support and more accountability. In my work as a teacher and as an instructional leader working with teachers in the area of arts programming, I have witnessed numerous cases in which teachers want to do the work, but do not feel that they have the time. They also do not feel that they know how to effectively address the arts curriculum in their classrooms (Oreck, 2001). Teachers are under pressure to ensure that they are producing results in other areas of the curriculum. In Ontario the instructional time in numeracy and literacy is mandated and subject to standardized testing. There is a perceived hierarchy of subjects in the curriculum and a majority of school instruction is focused on students thinking and demonstrating their understanding and knowledge in similar ways. This research seeks to find how teachers might embed, integrate, and implement sensory focused learning and mindfulness to the curriculum in order to facilitate authentic meaning making and engage students in divergent ways.

Why is there a need to find ways to engage students in school? Several factors contribute to the causes for students to engage or disengage from their learning. Students cannot be fully engaged and immersed in their learning if their sense of self, their feelings, and wellbeing are undervalued or ignored. It is important for students to learn in an inclusive environment that supports creative, sensory, emotional, physical, and intellectual development (Ministry of

Education, 2009). Students learn more effectively when they are engaged (Marzano and Pickering, 2011). This research investigates the vital components for authentic student engagement, especially intrinsic motivation and focus. It seeks to find ways that attention to sensory-based arts and mind body awareness might create opportunities for students to be authentically engaged.

1.2 Background and Need

My role as an arts educator has compelled me toward research in this field. In my work I have witnessed a range of attitudes and beliefs about the purpose and potential of arts education from the perspectives of students, teachers, and administration. The literature I have gathered for this study supports the view that sensory-based learning has potential to enrich learning experiences. During the fieldwork for this study I investigated how sensory-based arts pedagogies could be practically integrated into the junior curriculum and the impact the pedagogies might have on student engagement. The study was created in response to a vision of education that considers the multiple ways students can fully participate in their learning experiences. The study addresses needs in the areas of sensory awareness, arts programming, and student engagement.

The study sought to determine if sensory awareness could help students explore and express ideas, thoughts, and feelings in multiple and memorable ways. The purpose was to study how more immersive learning experiences might result in students creating memorable and authentic connections between ideas, curriculum, sense of self, and others. The study also responded to the notion that increased use of technology might contribute to how and what is being learned and cause distancing within the mind-body relationship. Another consideration that fed the need for the study was that current accountability and standardized testing favours specific areas of the curriculum and focuses on particular and limited demonstrations of learning. The arts curriculum encourages opportunities for students to learn in divergent ways as they engage in creative and critical processes. The intention was for the sensory learning in this project to be inclusive and invite physical, intellectual and emotional investment from the students as it honoured each student's potential to draw upon their individual and shared experiences.

1.2.1 Problem 1: Sensory Learning and Mind/Body Awareness

Sensory-based learning involves mind-body awareness and learning in multiple ways. This case study created opportunities to investigate how sensory-based arts and mind/body awareness might be possible in a junior classroom. Students in the study were given the opportunity to learn using explicit sensory strategies to heighten their awareness and encourage a holistic learning experience. The premise was that there was greater potential to create deeper emotional connections and understanding when the learning was felt in physical, visceral ways. A goal of the study was to provide teachers with an understanding of the value of sensory mind-body approaches and to explore if and how these holistic approaches could have memorable and meaningful curricular and social benefits for students.

1.2.2 Problem 2: Arts Programming Opportunities

It is the teacher's job to interpret the curriculum. In my work I have observed that when teachers do not include rich arts learning experiences in their programming there are a number of potential causes. Some teachers are unaware of the potential of effective arts programming. Some teachers feel unqualified to teach the arts. Others fear teaching the arts. Others may feel that the arts are not a priority because the same rigor of accountability is not associated with the arts. For whatever reason, many teachers do not seek out professional development in the arts or make effort to learn about best practices in arts education (Oreck, 2001). This study provided a rationale and methods for teachers to creatively embed sensory-based arts learning into the classroom. It also investigated the power and value of the arts curriculum and how effective arts programming enriches learning experiences, positively impacts student engagement, and deepens learning in other curricular areas through thoughtful integration. A goal of the study was to provide data that advocates for high quality arts instruction in elementary schools.

1.2.3 Problem 3: Student Engagement

This study offered opportunities for students to fully experience their learning, increase their interest, motivation and willingness to participate in their work. Lessons that specifically

activated sensory awareness were designed to heighten students' engagement, involve them more in their learning, and deepen their connection to the curricular content. The intention of the study was also to seek out the different ways that students were engaged and if there was any relationship between the activity and the type of engagement. Because student engagement is such a broad field that encompasses a wide array of theories and focused areas of research, this study also sought to determine if the sensory arts work provided engagement opportunities in particular categories selected from the work of Dewey (1934), Eisner (1993), Fredericks, Blumenfeld, and Paris (2004), and Marzano and Pickering (2011).

1.3 Purpose of the Study

Exploring the opportunities of sensory-based arts pedagogies in the junior classroom is rooted in the idea that mind-body awareness and attentiveness to the senses have impact on learning and engagement with the world (Eisner, 1993; Merleau-Ponty, 1965; Polanyi, 1966; Shusterman, 2006; Stinson, 1995). The purpose of this study was to examine how sensory-based pedagogies can be structured to provide opportunities for students to learn and make meaning in multiple ways. The goal was to contribute to research that suggests that sensory and mind-body awareness are integral to learning and engagement and that learning does not happen exclusively above the neck (Dewey, 1934; Eisner, 1993; Robinson, 2006; Stinson 1995). There are multiple ways to learn and to articulate learning and the limits of thinking are not defined by the limits of language. "We know more than we can tell" (Polanyi, 1966, p. 4). This study observed and interpreted the varied and multiple layers of how students articulate their insights, and how knowledge is shared through collaborative interactions between participants.

This small-scale exploratory case study examined how sensory-based arts pedagogies created learning opportunities and potential for increased engagement in a grade six classroom over a period of three months.

The fieldwork of the study was divided into three phases. In phase one I interviewed the teacher, collaborated on lesson planning, and met the class. In phase two I facilitated and observed lessons, documented samples of student arts work and written work, and conducted a

mid-point interview with the teacher. In the third phase I completed the data analysis and conducted the final interview with the teacher.

Data analysis occurred throughout the study. It was expected that the gathered data would formally, conceptually, and categorically intersect and overlap. These intersections provided opportunities for in-depth consideration. Progressive focusing by beginning with a general reading/viewing of the data initiated the process of attending to emerging themes. Using open coding, categories served the data rather than forcing data into pre-established categories (Cohen et al., 2011; Polkinghorne, 1995).

The participating teacher reported that sensory-based learning had a very positive personal, social, and academic impact on the students. He detailed specific incidences of heightened quality of classroom engagement particularly in the areas of curiosity, active learning, and authentic empathetic responses. As the researcher, I gathered compelling data that include artwork samples, written responses, and reflections. I observed a number of indicators of the students' engagement during classroom visits. Key findings are detailed in Chapter Four.

The findings reveal that there are multiple possible opportunities for sensory-based arts pedagogies. This small-scale case study investigates just a few ways that teachers may program and facilitate sensory-based arts pedagogies in their teaching to enrich their practice and deepen the learning for their students.

1.4 Research Question

What opportunities for learning and engagement do sensory-based arts pedagogies provide for junior students?

1.4.1 Sub-questions

How might sensory-based arts pedagogies be best structured and positioned to provide relevant and meaningful learning opportunities to junior students?

How might experiences that focus on sensory, mind-body awareness, and the imagination contribute to students' learning, engagement, and meaning making?

1.5 Significance

The project provided an opportunity for the participating teacher to collaborate on lesson planning and co-develop a rich unit of study. The teacher co-developed arts and sensory-based pedagogies, incorporated integration, gained access to resources, and considered how his learning environment supported meaningful exploration by students. Through this study the teacher expressed gaining new perspectives and insights on his students and generated meaningful student data for his own assessment purposes. The teacher has the opportunity to use ideas from the project in future planning and can develop the work further in different contexts. The project invited the teacher to contribute to arts education research and advocacy. Participation may inspire the teacher to adopt a leadership role in his learning community or co-present at workshops and conferences.

The students articulated their perspectives on the significance of the study and how it impacted their engagement and their view of school in various ways. Students benefitted from this work by having the opportunity to learn creatively and holistically as they experienced multiple layers of meaning across senses, arts disciplines, and subject areas. They made authentic connections as they explored and expressed their experience of the work through dramatic sound-scaping, creative and reflective writing, drawing, painting, dance, and the creation of an installation inspired by their novel study and their sensory engagements. The students gained insight on their own individual engagement and collaborative potentials during learning as they worked to achieve curricular outcomes.

The results of this thesis could be used to advocate for the importance of sensory-based arts education by providing another lens through which to view sensory learning and arts programming in the junior division. The intention is for the study to contribute to the on-going work of researchers in this field. The purpose is to broaden perspectives on the fundamental role that sensory-based arts education and mind/body awareness play in providing opportunities for students to learn and make meaning in multiple ways. Rather than relying on standardized test scores, the definition of student success can become more human and inclusive and educational conversations can focus more on authentic engagement and quality of learning experiences.

1.6 Definitions

For the purposes of this study all jargon or technical terms will be defined. The reader may find alternate definitions of these terms in other texts but for the purposes of clarity, the following definitions for the study's key terms will be used consistently throughout the study.

Engagement: Engagement can be defined a number of ways. For the purpose of this study, I assembled a definition based mainly on the work of Marzano and Pickering (2011) who define engagement as interest and attention, emotional connection, perceived importance, efficacy, and relevance.

Embodiment: integration of mind and body and a bodily capacity for knowing (Mehling et al., 2011).

Mind/body: The intention is that this term reinforces the idea that the mind and body are one and inseparably connected. The term mind/body is the integration of intellectual, emotional and physical attention (Mehling et al., 2011).

Sensory-based arts pedagogies: refers to instructional strategies and events that explicitly create opportunities for the activation of the learners' visual, auditory, tactile, olfactory, taste, kinesthetic, vestibular, interoceptive, and proprioceptive senses.

Technical terms (jargon) for the arts practices implemented in the classroom:

Body Storm:

“A strategy, analogous to brain-storming, that uses the body as a means of trying out movement possibilities linked to themes, issues, and ideas that students may be exploring. Students work together in a whole group, in small groups, or individually to generate movement ideas before shaping their work. The teacher suggests different elements of movement to encourage students to try out a range of variations” (Ministry of Education, 2009).

Corridor of Voices:

A convention used to explore the inner life of a character in drama. The character moves along the “corridor” between two lines of students who

voice feelings, thoughts, or moral concerns the character might be likely to have. The convention can also be used to explore the thoughts of a character who is facing a difficult task or decision. In this case, the voices would give advice and warnings (Ministry of Education, 2009).

Diamante Poem:

A structured seven-line poem consisting of nouns, adjectives, and verbs that describe two contrasting concepts. The first line is one word. The number of words increases per line reaching maximum length at the fourth line and then decrease again to the final one word line (usually an opposite of the first word). This structure creates a diamond shaped poem.

Empathy/Empathize:

The capacity to “step into the shoes” of another and to understand and appreciate that person’s experiences and circumstances. Empathy is developed through role-play, reflection, writing in role, and viewing and discussing plays, stories, and films. The ability to empathize with characters in drama is a fundamental aspect of building role/character and is essential to skill development (Ministry of Education, 2009).

Flocking:

A type of improvisation in which students move in groups, with no set pattern or in a diamond formation, following a leader and all doing the same movements simultaneously. This is an extended version of mirroring for three or more people. Participants do not necessarily need to be able to watch each other, as long as they can see the leader (Ministry of Education, 2009).

Mirroring:

“A type of improvisation. Two students face each other. Student A initiates the movement, while student B follows, maintaining eye contact as appropriate; students switch roles after a set time” (Ministry of Education, 2009).

Role on the Wall:

A convention in which students represent an important role in picture form “on the wall” (usually on a large sheet of paper) so that information about the role can be collectively referred to or added as the drama progresses. Information may include: the character’s inner qualities and external appearance; the community’s and/or the family’s opinions about the character; the character’s view of him or herself; the external and internal forces working for and against the character; known and possible hidden influences on the action or character (Ministry of Education, 2009).

Soundscape:

A combination of sounds to create atmosphere or to enhance important moments of a scene. Students work as a group to agree on and produce the desired sound effects, using voice and/or instruments. This strategy requires careful listening as well as group cooperation and sensitivity (Ministry of Education, 2009).

Writing in Role:

Writing done from the point of view of a character in a drama in order to deepen the writer's understanding of the character and create or develop scenes that reflect this understanding. Some examples of forms that may be used include diaries, letters, and reports on specific events that indicate the character's responses to those events (Ministry of Education, 2009).

1.7 Overview of Thesis

The thesis is structured in a five-chapter format. Chapter One introduces the study and presents the rationale, context, and background of the project. Chapter Two provides a review of how the concepts introduced in this study are approached in related literature. In Chapter Three the specific methods of planning, gathering and analyzing data are described in detail. Chapter Four describes the three major findings and highlights the trustworthiness and validity of the data and findings. In Chapter Five the relationship between the findings and the literature, and the contribution to the literature is explored. Chapter Five also details the limitations and recommendations. The study extends and further complicates what is known about the multifaceted topic of sensory and mind/body awareness practices and the impact these practices have on student engagement.

Chapter 2

2 Literature Review

The idea that sensory-based arts experiences deepen student learning and impact positively on student engagement draws on foundational work from the related fields of education, science, philosophy, and fine arts. The importance of exploring, expressing, and making meaning in multiple ways, the value of sensory experiences, and the significance of arts education are well supported in the literature of educational theorists. This chapter examines literature associated with the three major problems introduced in this research, keeping in mind that as the aspects of the problems overlap so too does the research from various fields. As a way of organizing the chapter each problem introduced in Chapter One has its own section of literature. However, due to the complexities and holistic nature of sensory based arts education and student engagement the borders between each category are blurry and the theoretical and empirical texts often encompass rich information that is naturally and holistically applicable across the boundaries that I have created for this thesis.

2.1 Sensory Learning

The study examines ways that sensory-based arts and mind/body awareness pedagogies create authentic opportunities for students in a junior classroom. Current research suggests that sensory-based teaching and learning is relevant and meaningful to primary students. The early years literature is replete with calls for young children to be encouraged to inquire and engage with materials in exploratory ways so that they connect deeply with the world through their senses in the Reggio Emilia approach (Edwards, Gandini & Forman, 2012). Through guest artist-researchers in the classroom and gallery field trips students have demonstrated a natural propensity to translate these sensory connections (MacCrae, 2007; Pavlou, 2013) and create meaning in multiple ways using their bodies (Brodsky, 2002; Pavlou, 2013) and imaginations (Dewey, 1934; Eisner, 2004; Robinson, 2006; Johnson, 1987).

In the Reggio Emilia approach, for example, the students are at the centre of the learning and are supported by their educators to explore and interact creatively in the environment. Students are encouraged to make their own choices about working independently, in small or large

groups, and with a variety of materials to pursue their inquiry and their goals within the broader school structure (Edwards et al., 2012). School is a place for students to practice internal listening, environmental listening, and listening to others as they communicate their mental images (thinking). The quality of the learning experience is elevated in these learning environments as the aesthetic dimension is paired with conscious awareness. The *hundred languages*, a concept developed by the school's founder, Loris Malaguzzi, refers to his contention that children construct meaning of the world through myriad sign systems. He suggests through his *Hundred Languages* poem that society unnaturally compartmentalizes school subjects and that school and culture limit possibilities by keeping the head separate from the body. Students learn through making, doing, communicating, and inquiring in a variety of different disciplines (Edwards et al., 2012). The Reggio Emilia philosophy is very supportive of the importance of sensory awareness for students. Edwards et al. contend that unless a sense of wonder, imagination, and empathetic relationships are cultivated:

There is a risk that we might respond to the sensitive world with our senses and mind anesthetized by everyday life. To benefit fully from opportunities, we need to ensure that our senses, and our curiosity, expectations, and interests, are kept constantly alive (p. 316).

The literature suggests that when the senses are featured in arts education practice, students have the opportunity to make deeper connections. Rather than relying simply on what they see to elicit creative responses, students can be invited to engage with source materials in more aesthetic, visceral, and divergent ways (Uhrmacher, 2009). In *Investigating interrelations in visual arts education: Aesthetic enquiry, possibility thinking and creativity*, Pavlou (2013) suggests that merely looking does not automatically stimulate imaginative responses in students. In her small-scale exploratory study, seven and eight year old students were asked to simply look at a work of art and then make art. Using the first artworks that the students created after only looking as a diagnostic, Pavlou notes significant differences in the work that was generated after experiential sensory opportunities were initiated. In the study she introduced guided visualizations to activate students' bodily senses. They immersed their imaginations and creativity, and actively engaged with original stimuli, resulting in thoughtful and divergent ranges of creative response. Students were urged to engage in their art making by finding the processes and materials that would best realize their ideas. Through active

involvement, careful looking, listening, activities, and supportive discussions students were given the freedom, permission, and confidence to create their own unique work. Pavlou's study examines the overlaps, interplays, and interactions that occur between art viewing, experience, and art making.

There is also evidence suggesting that when students create art and make their learning visible they can demonstrate the ability to translate between sensory media to represent their impressions and create meaning. MacRae's (2007) study, *Using sense to make sense of art*, focused on students' sensory responses to art during and after a trip to an art gallery. MacRae found that students who focused on the tactile were able to use art making as a tool for thinking about the world, rather than simply as a way to imitate it. The focus of the activity during the gallery visit was on the process of making art and not the product. The researcher found that students made important connections between the art making processes and the art objects that they created, the space where the objects were made (the gallery) and the people with whom they made the objects. The layers of meaning and contexts continued to build as the art was taken home to a familiar space, where it took on a new significance with the people who would encounter it there. Other studies corroborate MacRae's findings with literature documenting, for instance, that students experience "an intense and empathetic relationship between things" and are able to think simultaneously with their "hands, sensibilities, and brains" (Vecchi, 2004, p.138 as cited in MacRae, 2007). Making the learning visible during art making allows students to show the processes of their thinking and demonstrate the connection between their ideas (from the inside) and their actions (to the outside). Teachers may document the processes, reflect on student learning, create guiding questions, and engage in reflective conversations. The focus of the art making processes is always on the learning (Violet Juno, 2010).

The pedagogies mentioned in the above studies are usually associated with students in primary grades. However, the literature contains arguments that such approaches need not be reserved only for the very young. The theories that work for young children can easily be transferred to older students by attending to their interests and learning needs and by establishing an environment and attitude that appreciates curiosity and possibility (Jarvis & Lewis, 2002). For example, in *Art spoken here: Reggio Emilia for the big kids*, Cutcher (2013), explores the

possibility of nurturing older students' creative potential everyday as if it was a Reggio Emilia setting. Her following assertion echoes the ideas of Malaguzzi:

Our children are all born creative and brave, yet something happens to them as they grow – the opportunities to express themselves artistically at school become minimized, the art curriculum becomes marginalized, and our children's creative genius falls away (p.318).

Cutcher (2013) advocates for maintaining the focus on creativity throughout the grades as a way to equip students with the necessary skills to deal with the complexities of humanity. Older students can be involved in the process of making their learning visible by documenting their learning through process portfolios, visual arts diaries, or other divergent means. Producing these authentic artifacts are acts of meta-cognition, she argues. The physical environment is also important as it contributes aesthetically and helps students to feel that the space is well kept and cared for. A supportive social environment promotes students' sense of belonging and encourages positive interactions. This, she contends, benefits students of all ages and the entire learning community.

2.2 Arts Programming

In the field of fine art theory and criticism there is a growing interest in how the senses are used in the making, viewing, and discourse of fine art practices; for example, in the editor's introduction to *Art and the Senses*, four common themes were identified: the hierarchy of the senses, embodiment, art sense, and learning. Bacci and Melcher (2011) propose that historically the arts have privileged the visual and auditory senses, though more contemporary practices involve multisensory experiences and, for example, explore the nature of the body as a physical object, a cultural construct, and a component of personal self. Such practices follow the lead of cognitive psychology and neuroscience theories that explore the vital role that the body and sensory experiences play in understanding and making meaning. There are many contextual layers that influence and shape our sensory experiences. Art has the capacity to bring awareness to the senses. The arts can be used to make sense-based experiences more explicit. This can occur during the making of art and while encountering art of others. Artists are studying how experience shapes sensory perception rather than how the senses shape experiences and using these ideas in their work (Bacci & Melcher, 2011). This particular idea

has profound implications for education and is increasingly significant as students are relying more on screen interfaces and computer-based technology.

In order for arts education to be progressive it makes sense that educators pay attention to the world of contemporary art and research. An investigation into the work of artist/researchers in this field provides a glimpse at how research, art processes and senses interact, intersect, and inform how arts education might benefit from consideration of more explicit sensory-based approaches. The following artist/researchers have written about their discoveries and even though the work is not directly related to education, each offers exciting possibilities that can be applied in educational contexts. In their arts research, Malcolm Learmonth and Karen Huckvale (2012) use a river metaphor to describe their creative processes and examine how processes *behave* rather than determining what things *are*. They explore ‘thinking with their bodies and feeling with their brains’, as they examine how the biology of art generates new possibilities. The research of Susan Finlay and Gary Knowles (1995) explores memories that feature and access sensory responses. Their work concerns the processes of transforming original sensory experiences into meaningful works or art. They explore the challenges of developing and representing personally sensed and experienced ideas so that they are authentically and effectively communicated without losing their original essence. The artist creates an object to embody a felt experience. The object becomes a symbol and a new creation that elicits an aesthetic feeling to those who encounter it (Langer, 1967). The research in this project will also attend to the parallels of authenticity in arts processes, in research, and in teaching and learning, and will model how returning to the source of the inquiry as a way to stay focused helps facilitate meaningful links between the idea (theory) and the action (practice).

Awareness of the senses is not limited to what an individual sees, hears, feels, smells and tastes. The literature finds that kinesthesia (sense of movement), proprioception (sense of bodily position), vestibular (sense of balance), and interoception (sense of feelings, mood, well-being and emotional state) are also important senses, crucial for exploring how meaning is attributed to the awareness of one’s own body in space and how movements create meaning (Patterson, 2012). Donald Blumenfeld-Jones (2009) expands and clarifies ideas about bodily kinesthetic intelligence, as introduced in Howard Gardner’s (1983/2011) multiple intelligence

theory. This intelligence (a heightened awareness of the sense) is experienced from the inside out through participation rather than as an observer of movement. The core of the intelligence is the ability to use the bodies in ways that achieve ends through which the same could not be achieved by any other means (Blumenfeld-Jones, 2009). When the kinesthetic sense is engaged, the other intelligences play a supporting role. Kinesthetic intelligence requires awareness and ability to sense one's motion, informing inner states and outer connections to the world, incorporating both mind-body duality and fusion. Dance exemplifies the value of the body's cognition. Thought exists throughout the body, not just above the neck (Brodsky, 2002; Damasio, 2010; Johnson, 1987; Kiefer & Trummpp, 2012; Stinson, 1995; Robinson, 2006; Uhl, 2011). Life is experienced through the somatic self. It is a way of learning (Stinson, 1995). In *The Tacit Dimension*, Michael Polanyi (1969) asserts the following ideas about the body's role in cognition:

The way the body participates in the act of perception can be generalized further to include the bodily roots of all knowledge and thought. Our body is the only assembly of things known almost exclusively by relying on our awareness of them for attending to something else. Parts of our body serve as tools for observing objects outside and for manipulating them. Every time we make sense of the world, we rely on our tacit knowledge of impacts made by the world on our body and the complex responses of our body to these impacts. Such is the exceptional position of our body in the universe (p.147).

Following these ideas, Joyce Brodsky (2002) in *How to see with the whole body*, proposes that the entire body is involved when making art, while exploring the practice, and when viewing and interpreting artworks. She suggests that during a sensory “whole body” experience, the “lived body” is engaged in both the making (exploring practice) and the viewing of (interpreting) artworks.

When considering the senses, the mind body connection, creativity and the impact these have on learning and engagement, increasingly researchers can turn to findings from brain research. Studies on the brain have found evidence that the senses play a crucial role in creativity and learning. Mark Johnson (1987) posits that creativity is the process of generating new connections among ideas, which draw upon imagination and experience. Imagination links cognitive and bodily structures. The origin of image schemata is rooted in physical experience

and imagination is crucial for meaningful knowledge. Physical exercise and the practice of creative skills (e.g. participating in dance) improve the rate of learning, stimulate brain growth and increase brain plasticity (Damasio, 2010). There is also evidence that aspects of dance pedagogy and practice, yoga asanas, and breathing exercises, often alleviate anxiety and produce calm, relaxation, and alertness so that the individual can be more receptive to learning (Ratey, 2008).

Elliot Eisner (1993) contends that experience is “the bedrock upon which meaning is constructed” (p.5) and that learning is sensory before it is symbolic. This idea is supported by recent brain research that suggests that even complex thoughts are sense-based and not abstract-symbolic (Kiefer & Trumpp, 2012).² This has important educational implications for designing learning environments and for creating strategies that support sensory-based learning so that students can have more enduring and richer learning experiences.

2.3 Student Engagement

This research investigates how sensory-based arts programming might impact student engagement. Because student engagement is such a broad and complex area of investigation and is dependent on numerous variables this single case study will not address the scope of possibilities. The purpose of this section of the literature review is to present a focused selection of research on the topic of student engagement that is relevant to sensory-based arts learning.

In the literature, student engagement has been subdivided by three categories of behavioral engagement, emotional engagement, and cognitive engagement (Fredricks et al., 2004). Positive behavioral engagement concerns the social construct and includes following protocols, demonstrating effort, persistence, concentration, paying attention, and participating. Emotional engagement involves students’ personal affective responses including feeling happy, sad, bored, excited, afraid, angry, a feeling of personal value and a sense of belonging, etc.

² One example of how researchers study the difference between the activated motor regions in the brain when a child scribes a letter by hand versus when they type the letter on a keyboard. Direct sensory experiences are most beneficial for effective recall (Kiefer and Trumpp, 2012).

Cognitive engagement concerns investing effort to solve problems, master skills, and comprehend complex ideas (Fredricks et al., 2004). In a balanced program the boundaries between these categories overlap and shift and the teacher and students adapt as needed.

Theoretical and empirical research supports the connection between sensory-based arts pedagogy and authentic student engagement. This study's working definition of student engagement, adapted from Marzano and Pickering (2011), Hubard (2007), Eisner (2004), Fredricks, et al. (2004), and Csikszentmihalyi (1990) includes attention, emotional connection, interest, perceived importance, efficacy, intrinsic motivation, and relevance. Students are more likely to give attention to that which is relevant to their lives (Dewey, 1902). However defined it seems widely accepted that engagement is an important factor for a positive educational experience. The premise in this study is that students will be more engaged if there is increased awareness of how their bodies and senses are actively involved in the learning.

In 2004 Eisner wrote, “engagement in school can and should provide intrinsic satisfactions, and we exacerbate the importance of extrinsic rewards by creating policies that encourage children to become point collectors” (p.3). If students are invited to make relevant connections between their experience and the concepts they study they may be more challenged, focused, and intrinsically motivated to engage in creative meaning making. Eisner (2002) suggests that there are three reasons to do something. One reason is to enjoy the quality of the experience, the second reason is to enjoy the end product or result, and the third reason is for an extrinsic reward. In the case of school the extrinsic reward may be a mark or grade. If doing the work is its own intrinsic reward, the interest in the activity is authentic and will likely continue, whereas extrinsic activities usually cease when the rewards are gone (Csikszentmihalyi, 1990; Eisner, 2002; Marzano & Pickering, 2011). Mind-body connection, sensory exploration, motivation and engagement in arts education are associated to the concept of *flow* (Csikszentmihalyi, 1990). Flow is an optimal state that requires clear goals, immediate feedback, balance between challenge and skill, attention, and concentration. In order to be engaged and motivated students need to think that the learning is important and that they will be able to do it (Csikszentmihalyi, 1990; Marzano & Pickering, 2011). In flow, activity is autotelic. The desire to do the activity is for the sake of doing it, not for its results (Csikszentmihalyi, 1990).

This research aimed to create opportunities for students to be intrinsically motivated, challenged, focused and feel successful making authentic and relevant connections between their sense experiences, their mind-body awareness, their creative activity, and their learning. Teachers and researchers can never know everything that a student has learned, why or how deeply they are engaged, or what they consider significant enough to become important throughout their life. This small-scale glimpse into students' responses is an attempt to gain qualitative insights on the contributions of sensory-based arts pedagogies on student engagement. Teachers can use the information about the senses, arts curriculum, and engagement to design balanced programming that creates opportunities for each student to experience authentic, creative learning.

2.4 Theoretical Framework

The framework for this research draws largely upon the work of arts education professor, Elliot Eisner. According to Eisner (2002) the most fundamental human experience is the relationship between the senses and the qualities of the environment. He contends that working in the arts provides opportunities to refine sensibilities that extend beyond school and contribute to an overall aesthetic appreciation in and of the world. The arts can help make learning visible by allowing students to explore experiences (ideas, thoughts, and feelings) using sensory awareness and imagination. Through arts practices students can discover new ways to learn, create work, perceive work created by others, communicate, and share common and diverse ideas.

A central emphasis of this research project was to co-plan and study opportunities that encouraged students to develop their sensory, mind-body connection and find multiple ways to authentically explore and express their work. As part of the research, learning opportunities were developed to cultivate students' unique experiences and enhance the quality of their engagement. The work focused on processes more than products, offered access to multiple modes of exploration and expression, and encouraged mindfulness, divergent thinking, and freedom from conformity.

Eisner (1982) suggests that the mind is rooted in the senses and experience is gained through the senses. As students develop their senses and mind-body awareness and learn about

different arts forms and processes, their choices about how they explore and express their ideas, thoughts, and emotions can become increasingly more sophisticated. Individuals may be drawn toward a particular arts experience and become active participants while focusing on an isolated sense or experiencing the qualities of a particular intelligence. Students may also create meaning by constructing how their responses interact and relate to other sensory responses, concepts, and intelligences (Eisner, 1982). This research provided the opportunity for junior students to explore connections between the sensory and the abstract, and make meaningful choices through different arts disciplines and forms of expression.

2.5 Literature Review Summary

The significance of the role of the senses, emotions, the body, and active meaning-making through creative, divergent learning are supported in education, science, philosophy, psychology, and the arts. There is a plethora of research to suggest that sensory learning is effective in primary grades. However, as students reach the junior and intermediate level, sensory work and attention to the body and its potential tend to be replaced by more academically rigorous pursuits and emphasis on grades and accountability. Access and appeal of technology and increased screen-time also contribute to distancing students from their bodies and potentially limit their capacity and opportunity to learn and interact fully in school and life. Students in this study had the opportunity to explore and articulate their ideas during experiences that encouraged sensory, mind-body awareness, and sense of self and others.

In Chapter Three the setting, participants, methods, materials, instruments, data gathering, and analysis for the study are detailed. Chapter Three also describes the collaborative planning processes, the integrated unit that was developed, and the classroom events that occurred resulting from the work of this study.

Chapter 3

3 Methods

This case study explored the effectiveness of holistic sensory-based arts pedagogies in a junior class setting. It sought to understand how these pedagogies could create learning opportunities during arts and integrated learning experiences in a grade six classroom over a period of three months. The study also investigated the potential of these experiences to impact the engagement of the participating students. In the study the term sensory-based arts pedagogies refers to instructional strategies and events that explicitly create opportunities for the activation of learners' visual, auditory, tactile, olfactory, taste, kinesthetic, vestibular, interoceptive, and proprioceptive senses. The term student engagement includes but is not limited to interest, attention, perceived importance, efficacy, relevance, and physical, emotional, and social connection (Marzano & Pickering, 2011). The study attended to how multiple modes of exploration and expression contribute to these different categories of student engagement. This chapter elaborates on the methods of the study, introduces the setting and participants, and describes the intervention and development of the materials and instruments. This chapter also outlines how the data were collected and analyzed.

3.1 Case Study

Case study was chosen, as it is an appropriate method to study how a concept or theory could be accomplished in a real, natural setting (Yin, 2009). The case is the planning and implementation of a sensory-based, integrated arts unit inspired by a book in a grade six classroom. The research took place in the natural setting of the classroom and fluctuated between structured and unstructured typology in that I collaborated with the participating teacher to plan the learning events but once the implementation was in process the teacher and I took turns leading the lessons. This study is classified as a single case, small-scale, exploratory case study. It was participatory in that it was collaborative and the planning developed through a spiral of planning, implementing, reflecting, and further planning. I communicated my intentions to the students from the beginning so they understood I wanted to learn from them and their ideas and interests were an important part of the process. The

teacher, students, and I solved practical and creative problems together. My role as researcher shifted organically between non-participatory observer (recording notes on the side) and participatory facilitator (working with students individually, in pairs, and small groups, and leading lessons). When the teacher facilitated I observed and when I facilitated the teacher observed. The teacher and I also delivered some of the lessons together. The teacher and I were flexible and the students adapted easily to our team teaching approach. The approach allowed me to be more involved in the class, gave the students variety, provided opportunity for the teacher to gather his own assessment data, and afforded additional perspectives because the teacher shared his thoughts after observing. Using the case study approach I generated thick description and blended description with analysis (Hitchcock & Hughes, 1995, as cited in Cohen et al., 2011). The case study method also allowed flexibility so that I was able to shift between whole class and individual focus. The integrated unit and culminating task associated with the completion of their book, *Fatty Legs*³, allowed for a natural ending to the project. Using a single-case design (Yin, 2009) this project attempted to depict the complexities of the events and interactions that occurred during observation using vivid description (Hitchcock & Hughes, 1995 as cited in Cohen et al., 2011). Over the three-month period we examined together how sensory-based arts pedagogies created learning opportunities and potential for engagement in the grade six classroom.

The study attended to how students made connections between their senses and self (*mind-body*) awareness, arts processes, learning, and meaning making (Amann, 2003; Jarvis & Lewis, 2010; Willard, 2010). In this study mind-body awareness refers to the integration of intellectual, emotional and physical attention (Mehling et.al., 2011). Throughout all aspects of the research I kept the main research question in mind: What opportunities for learning and engagement do sensory-based arts pedagogies provide for junior students? This question was further dissected in the following sub questions: 1. How might sensory-based arts pedagogies

³ *Fatty Legs: A True Story* by Christy Jordan-Fenton and Margaret Pokiak-Fenton is the story of Olemaun (Margaret) Pokiak, a young Inuit girl from Banks Island who wants to learn to read and experiences the injustices of the residential school system in Aklavik in the 1940s. It is beautifully illustrated by Liz Amini-Holmes. *Fatty Legs* is classified as non-fiction as it features archival photographs and documentation throughout. In this thesis *Fatty Legs* is referred to as a novel (because of how it was studied in the class), a book, and a story. *Fatty Legs* has won several awards and is particularly accessible to grade four to seven students.

be best structured and positioned to provide relevant and meaningful learning opportunities to junior students? 2. How might experiences that focus on sensory, mind-body awareness, and the imagination contribute to students' learning, engagement, and meaning making? Figure 3.1 provides a graphic of the three main research problems that emerged from the research questions relate to one another.

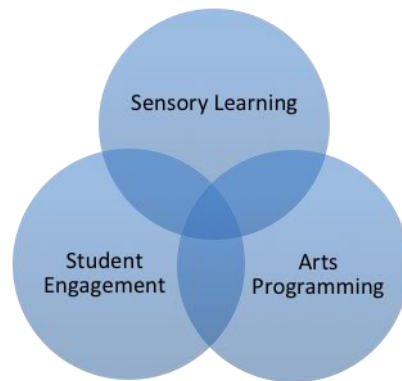


Figure 3.1 The Relationship of the Three Research Problems

3.2 Setting

The study took place in a grade six classroom in a Junior Kindergarten to Grade 8 school. The school is located in an economically diverse, multicultural, multi-faith, and multilingual urban community in a relatively affluent area. There are great efforts among the teachers and the parent community to be socially active and equitable. During my visits I observed several initiatives including *Me to We* campaigns, *PFLAG* (Parents and Friends of Lesbian and Gays) information sessions, and *Autism Speaks*. The school also offers an impressive roster of extra-curricular and co-curricular clubs which include yoga, social justice, environmental and eco-clubs, visual art, drama, dance, drumming and singing, urban voice and speech arts and many others as well as several sports teams and clubs. The teacher that I worked with for the study was an arts advocate at his school and facilitated collaborative extracurricular activities, such as the mural club. For the study, I proposed to work in one class to investigate potential for curricular integration, sensory arts programming, and engagement.

3.3 Participants

In the original conception of this project I imagined researching in more than one classroom. However, as I began to plan I realized that it was essential to concentrate on one classroom to support deep focus. Dispersing time and resources in multiple locations where more students, a variety of teaching styles, differing school agendas, multiple curriculum content foci, etc. would have increased the scale and complexity of the project beyond a manageable scope.

The unit of analysis for this case study was a junior classroom and the individuals in the junior classroom. One grade six teacher participated in the study. The classroom consisted of 22 students, twelve females and ten males, all of whom were between eleven and twelve years old. All students were invited to participate in the project and had the choice to voluntarily embark on the research (Burrell & Morgan, 1979, as cited in Cohen et al., 2011). On the day that I arrived to describe the project all the students in the classroom eagerly signed the assent form. All students participated in all the activities that were presented as a result of the curriculum planning that the teacher and I generated. Twelve students in the class (four males and eight females) returned signed permission forms and were included in the study.

The teacher (and classroom) selected for the project was a non-probability sample. I do not presume or suggest that the participants represent the wider undifferentiated population of teachers and students. They represent themselves. The selection was purposive, intensity sampling (Teddlie & Yu, 2007, Teddlie & Tashakkori, 2009, as cited in Cohen, et al., 2011), as the project required the participation of one experienced arts educator, having a comfort level with a variety of approaches to arts facilitation, and an interest in pursuing this work. The sampling could also be classified under the category of reputational sampling (Teddlie & Yu, 2007; Teddlie & Tashakkori, 2009, as cited in Cohen et al., 2011), as my intention was to call upon teachers who demonstrated expertise in arts education and interest in arts advocacy. I planned to contact prospective participants via email (Appendix D) through my affiliations with both the Ontario Arts Education Association and the Council for Drama and Dance Educator subject associations. The requirement was that the teacher must teach the arts curriculum in a grade six classroom. I was very pleased that my first choice to participate in the project was a teacher who met my invitation with a hearty and enthusiastic affirmative answer.

The study was designed to take place in a grade six classroom. Sensory work is usually more prevalent in primary grades because young students often learn how to interact with the world in a more concrete way. I identified grade six as an appropriate grade for the project so that I could examine the sensory based arts pedagogies on the highest grade in the junior division. I wanted to explore sensory-based arts pedagogies with this grade because they are entering adolescence, which can be challenging and confusing as they navigate issues including identity and self-esteem. I wanted to offer the opportunity for students to acquaint, or reacquaint, themselves with their sensory awareness, engagement, and flow so that they could use the awareness as a tool. My experience with students in grade six inspired me to believe that they would be capable of balancing abstract with sensory and this project aimed to widen their palate of possibilities and give them choice and confidence to immerse themselves in their learning and interactions with the world.

My role in the classroom was that of researcher and teacher, as I participated as a guest artist/teacher and as an observer. The teacher led the sessions he was comfortable leading and had the opportunity to observe when I led. Our roles as teachers, observers, and artists blurred and intersected in a collegial and organic manner.

3.4 Intervention: Fieldwork

The fieldwork of the study was divided into three phases. In phase one I met the class, interviewed the teacher, and collaborated on planning lessons. In phase two I continued to plan, co-delivered and observed lessons, gathered samples of student artwork and writing, and conducted a mid-point interview with the teacher. In the third phase I completed the data analysis and conducted the final interview with the teacher. The three main methods of data gathering and analysis were interviews, observations, and student work samples.

I received ethics approval (Appendix E) from Western University in October 2014 and the school board late December 2015. I immediately recruited my teacher and in early January 2015 I met with the teacher and the principal to obtain permission to conduct the study and to begin scheduling visits. I visited the class a total of ten times over a three-month period between January 8, 2015 and April 2, 2015. The time between visits ranged from two days in a

row to two weeks apart. I worked with the teacher to determine how the visits could be spread out with enough time in between to refine the plans and deal with the data gathered but be close enough so that the project preserved momentum. The teacher maintained the sensory arts focus in the classroom throughout the three months.

Entering into this work was very exciting because I had many preliminary ideas for planning sensory arts learning experiences. I looked forward to the collaborative planning process to develop and focus the ideas. The start date for the fieldwork of the project was contingent on ethics approvals therefore I had to keep the planning flexible to be able to meet the teacher's particular curricular needs at the time. I prepared the groundwork for plans that I thought might work effectively to integrate with the grade six curriculum. I was confident that we would find a rich path but did not know exactly the direction that the research would take until I met the students, worked with the teacher, and allowed their process to inform what would be the most authentic and meaningful experiences. Prior to meeting the class the teacher and I had discussed different possibilities and kept the planning open and flexible. There were numerous options. I had several lesson ideas prepared to use as a starting point or as a back up if integration felt forced or inauthentic.

3.4.1 Collaborative Planning with the Teacher

The project design included the premise that the lessons that occurred in the classroom as part of the study would fit seamlessly with what the teacher was doing. As a classroom teacher I am well aware of the magnitude of curriculum expectations that must be addressed in a school year. I knew that it would not be the best pedagogical approach to expect that a teacher could wait, or hold, or jump ahead. Therefore I did not want to plan extensively in advance of meeting with the teacher until we could discuss his needs as well as the ideas for the project. The collaboration was always intended to be a crucial component of the work. The initial plan was that the teacher and I would design the lessons together. It was important that the teacher was involved in this planning for several reasons. The scope and sequence of the lessons related to the research had to fit seamlessly into the teacher's existing plans so that the teacher did not feel that the project was an additional burden. The work had to be authentically integrated so that it was beneficial to the students, so that it made sense, and so that it caused

the least amount of disruption to their flow of learning as possible. Planning with the teacher demonstrated respect for teacher's expertise in programming and pedagogy. It also acknowledged his relationship with the students and his understanding of their backgrounds, needs, and interests.

To begin the collaborative process I had prepared several preliminary plans to use as seed ideas. These rough plans aligned with the grade six curriculum, had integration potential, and very generally satisfied different aspects of the project. I assumed that these plans might be used as a starting point and/or as a back up in case the teacher and I faced challenges or had difficulty integrating. Forcing artificial programming was of no interest to either of us. The plan was to be open, flexible, and fluid with the sensory arts approaches because one of the main purposes of the study was to explore opportunities to enrich the curriculum and deepen student engagement. It might have been easier to deliver a ready-made plan but that would have disregarded the needs or ideas of the teacher and students. I had no interest in imposing my ideas on the class, rather I wanted to bring the opportunity for us to seek out this potential together. This participatory approach valued the established dynamic of the teacher and the students and democratized the process so that both the teacher and the students felt involved and a sense of ownership with respect to the process. Knowing that one approach would not fit all, or that any grade six classrooms would be the same, ideas had to remain flexible and open to the needs of the teacher and the students with whom I was working and the direction they might want to take the work. As a contingency plan I was also prepared to suggest revising existing plans through a sensory, mind-body lens in order to accommodate the research needs, if it became necessary. However, this was not required because as we facilitated and observed we discovered an authentic path for the learning and the study and created a new integrated unit.

Programming in the arts often requires a framework that builds on previous skills or concepts and allows for possibility and divergence. The Ontario Curriculum: The Arts (2009) suggests teachers determine the prior knowledge of the students and provide differentiated instruction. The teacher and I focused on providing a flexible structure to attend to the different needs of the students. We assumed and expected that as each learner participated in the same lesson they would experience it uniquely because they bring their own individuality and background to the

experience (Eisner, 2002). As we discussed our plans several decisions had to be made to determine if the experiences would involve discreet events and/or if the learning could be part of a unifying base of inquiry for a meaningful, sustained project that integrated sensory learning in dance, drama, visual art, and language arts. The teacher and I were both in favour of the latter approach as it aligned more closely with both of our pedagogical preferences and, according to the Ontario Curriculum: The Arts (Ministry of Education, 2009), is more effective.

3.4.2 Meeting the Class

My first encounter with the students was to introduce the study, answer questions, and hand out assent letters and permission forms so they could make an informed decision about whether they wanted to participate. In the design of the study every student would participate in all the work that was happening in the classroom regardless of whether they agreed to be part of the study. There was no difference in the amount or type of work that they were expected to do because it was all within the scope of the curriculum. The only difference was that if they did not agree to be in the study I would not use anything they said or any of their work samples in my thesis. The students were receptive and curious and I gained a good sense of the teacher's rapport with the students, the environment of the classroom, and the school as a whole. All students signed assent forms. We closed the first session with a brief movement activity.

3.4.3 Planning and Implementation

Immediately following the first visit I sent the teacher the first interview protocol. A week later the teacher and I met to participate in the first interview and preliminary planning session. The purpose of the initial, one-hour interview was to establish the setting of the study, clarify the starting point in terms of prior knowledge and experience, and to gather broader data about the teacher's educational philosophy, background and interest in arts education. The questions then began to focus more narrowly on the teacher's ideas and thoughts about the use of sensory-based strategies in arts education. Interview transcripts were shared with the teacher following the interview for verification and or clarification. During this meeting I shared my preliminary plan to begin with a lesson to provide general overview of the project to familiarize the

students with some of the vocabulary and concepts associated with sensory work, flow, and engagement in order to inform and prepare the students for the work to come.

My second visit, the first official lesson, was an opportunity for me to share more ideas about the project and introduce vocabulary associated with sensory learning, engagement, and the concept of *flow* (Csikszentmihalyi, 1990) so the students felt informed and connected to the project. For this lesson I created a power-point for the teacher to lead in class. The purpose of this lesson was to introduce the students to some of the language of the senses, the arts and the idea of flow (Csikszentmihalyi, 1990). During this lesson we discussed the main ideas and I gathered diagnostic information to help inform the direction that the research would take. I gathered data from the students to determine what they liked to learn, how they liked to learn and I gave them the opportunity to share their own experiences of flow (Appendix E). At this point I was still experimenting with existing curricular content to determine the best approach. The teacher and I were in the exploratory phase of programming the sensory learning. The teacher had informed me that the students were designing dwellings in math so following the power-point and diagnostic reflection, I facilitated a visualization exercise to help the students consider their dwellings in an imaginative and sensorial way through creative movement. It was challenging to work with these students in the afternoon and hold their attention and interest. After observing the class and facilitating the movement I determined that the first sense to investigate would be auditory with an emphasis on active listening strategies and skills. I knew this would be essential for the success of the project regardless of the curricular content that we would focus on throughout the study.

A major turning point in the study was when the teacher and I decided to focus the learning exclusively on the book, *Fatty Legs* (Jordan-Fenton & Pokiak-Fenton, 2010). During the fourth visit when the students were actively involved in their soundscape activity (described in more detail in 4.2) both the teacher and I knew that there was great potential for the students to have a deeper and more meaningful experience by focusing the sensory arts experiences exclusively on the themes generated by this book. Originally, I had resisted the specificity of the book because I thought it might be too exclusive for the study. I soon realized that my hesitation was linked to my concern that if the study focused too much on one source it would not do enough or it would not be as useful. I let go of the unrealistic notion that I wanted the study to

encompass as much as possible. Relinquishing that expectation and realizing specificity and focus benefitted the research and made it stronger was part of my own learning journey. Basing the work on specific, rich content had much better potential. Teachers and researchers could apply similar strategies and approaches to adapt the ideas across the curriculum and find their own meaningful and authentic connections with source material of their choice, based on their curricular needs and student interest.

During the fieldwork, the teacher and I facilitated sensory-based awareness through various creative processes in different arts disciplines. Students practiced using their senses and mind-body awareness to explore and respond through the disciplines. During the study, the students were actively involved in constructing their learning. The sources and materials were interpreted in different ways to highlight the importance of multiple points of view, multiple ways of knowing, multiple learning styles and preferences. The teacher considered students' prior knowledge and access to materials in order to determine how to introduce the strategies. The students practiced different methods of relaxation and engaged in exercises that activated somatic memory and mind-body awareness. They explored physical and metaphoric connections in movement, writing, drama, and visual art and made explicit connections between their sensory, experiential learning, and the curriculum. Students participated in individual and collaborative sensory-based arts experiences and assessed and reflected on their own creative and critical processes.

3.4.4 Chronology and Context of the Project

Prior to the beginning of the research project the class was studying Canadian history in Social Studies. The teacher provided statistical information, articles and artifacts on First Nations, Metis and Inuit cultures. The students conducted independent and group research on-line. The teacher shared current documentaries and engaged the students in critical conversations. Students wrote letters to Prime Minister Harper to address equity and funding as part of the 'Have a Heart' campaign. In Language Arts the teacher introduced *Fatty Legs*, a true story about a young Inuit girl and her residential school experience. During the learning experiences (see Table 3.1) the students continued their related history programming and the teacher

ensured the students realized that history is ongoing and many First Nations, Inuit, and Metis people continue to face numerous issues and inequities all over Canada today.

Table 3.1 Learning Experiences

Learning Experience	Sensory Focus	Subject/ Discipline	Description
Novel Study		Language Social Studies	The teacher introduced <i>Fatty Legs</i> at approximately the same time as my first visit.
Sensory Arts project introduced to students		Introduction	Students: <ul style="list-style-type: none"> • were introduced to the project • received assent/permission forms • answered questions • participated in a movement activity
Engagement and Flow Introductory lesson	Auditory Visual Kinesthetic	Language Learning Skills Dance	Students: <ul style="list-style-type: none"> • participated in a power-point presentation to learn vocabulary associated with engagement and flow • responded with examples of their own ideas of engagement and flow • participated in movement activity
Hearing and Listening Skills	Auditory	Drama Language	Students: <ul style="list-style-type: none"> • participated active listening skills • practiced techniques and strategies to acquaint them with interactions during communication • practiced listening in pairs in a variety of ways (altering eye contact, body language, proximity, direction, volume, and intensity).
Moving	Auditory		Students:

Stories	Kinesthetic		<ul style="list-style-type: none"> • told stories in partners • retold original story in movement • practiced close listening skills • practiced finding main points of story • communicated ideas through gesture and facial expression • made decisions about content and quality of movement.
Drawing Stories	Auditory Visual	Visual Arts	<p>Students:</p> <ul style="list-style-type: none"> • participated in partner drawings to retell what they understood about their book, <i>Fatty Legs</i>
Drawing to Music	Auditory Visual Kinesthetic	Visual Arts Music	<p>Students:</p> <ul style="list-style-type: none"> • participated in a free-style drawing experiment to music • responded to prompts to elicit descriptive words, access memories and imagine shapes, colours, textures, line qualities, etc. • expressed impression of the music
Dancing to Art	Auditory Visual Kinesthetic	Dance Visual Arts	<p>Students:</p> <ul style="list-style-type: none"> • participated in improvised movement in response to image.
Introduction to Soundscape	Auditory Kinesthetic	Drama	<p>Students:</p> <ul style="list-style-type: none"> • participated in a teacher directed soundscape as a sample and exemplar for the next lesson
Soundscape based on <i>Fatty Legs</i>	Auditory Kinesthetic	Drama Music	<p>Students</p> <ul style="list-style-type: none"> • learned elements of sound • learned techniques for audio art • created independent soundscapes in small groups based on sounds

			<p>from <i>Fatty Legs</i></p> <p><i>The teacher and I decided to concentrate Sensory Arts lessons exclusively on Fatty Legs.</i></p>
Throat Singing	Auditory	Music	<p>Students:</p> <ul style="list-style-type: none"> participated in close listening of Inuit throat singer Tanya Tagac https://www.youtube.com/watch?v=e87jGWvbLsg
<i>Monster</i> Poem Drawings	Auditory Visual Kinesthetic	Visual Art Language	<p>Students:</p> <ul style="list-style-type: none"> created visual representations of a challenging and difficult poem by Dennis Saddleman (2000) https://soundcloud.com/cbc-radio-one/i-hate-you-residential-school
Introduction to dance elements	Kinesthetic	Dance	<p>Students:</p> <ul style="list-style-type: none"> participated in a series of active dance lessons to increase confidence in movement learned dance vocabulary
Mirror Shadow	Kinesthetic Visual	Dance	<p>Students:</p> <ul style="list-style-type: none"> observed partners slowed their movements communicated using their bodies gave and took control.
Flocking	Kinesthetic Visual	Dance Language	<p>Students:</p> <ul style="list-style-type: none"> identified bird imagery in book participated in a structured improvisational shadowing dance in small groups and as a full class
Role on the Wall	Visual Auditory Imaginative metaphoric	Drama Language	<p>Students:</p> <ul style="list-style-type: none"> engaged in a discussion and generated ideas based on the main character of their book, <i>Fatty Legs</i>

	reference to where senses are felt	Dance	<ul style="list-style-type: none"> wrote words and phrases in symbolic locations on life sized graphic outline of Olemaun on large kraft paper referred to graphic throughout unit
Dancing the Character And Body Storming	Kinesthetic	Dance	<p>Students:</p> <ul style="list-style-type: none"> created group dances based on their 'Role on the Wall' responses chose key words and concepts to exemplify the inner and outer world of the main character, Olemaun used the sensory prompts, elements, and techniques to create dance pieces to explore and express their impressions of Olemaun's life used body storming to explore the movement possibilities generated movements, revised, practiced, and performed dance pieces for one another learned and practiced how to create a beginning, middle and end to their dance work learned audience etiquette and practiced peer critique reflected on the creative process and on the experience of watching their classmates' dance pieces
The Blueberry meditation	Taste Texture Visual Smell/	Language	<p>This eating meditation (Appendix G) was based on a strategy found in, <i>The Way of Mindful Education</i> (Rechtschaffen, 2014).</p> <p>Students:</p> <ul style="list-style-type: none"> slowed the eating process attended to the various sensations associated with the process of

	Olfactory		<p>eating</p> <ul style="list-style-type: none"> • identified what happens at each stage • followed the prompts • responded individually on charts • shared experiences with others
Mystery Smells	Smell/ Olfactory	Language	<p>Students:</p> <ul style="list-style-type: none"> • received five small, labeled cups that contained samples of smells • smelled contents of each cup • considered questions and prompts • chose one smell to respond (Appendix H) • shared experiences with others
Texture Tables			<p>Students:</p> <ul style="list-style-type: none"> • felt different textures at stations • responded to material (Appendix I) • shared responses with each other
Sense Storm	Consideration of all the senses	Language: Reading Writing	<p>Students:</p> <ul style="list-style-type: none"> • worked in groups to gather evidence of different senses in the book, <i>Fatty Legs</i> • investigated one sense and reported their findings to the class
Expository Essays		Language: Writing	<p>Students:</p> <ul style="list-style-type: none"> • wrote expository essays on the author's effective use of a particular sense in the book, <i>Fatty Legs</i>
Writing in Role: Letters Home		Drama Language: Writing	<p>Students:</p> <ul style="list-style-type: none"> • assumed the character of Olemaun and wrote letters home • explored ideas, practiced empathy and imagined what it might have been like in Olemaun's situation • safely explored difficult issues

Corridor of voices	Auditory Kinesthetic	Drama	<p>Students:</p> <ul style="list-style-type: none"> selected snippets of writing in role to verbalize essence of their letter stood in two parallel lines and took turns repeating their snippet travelled down the corridor of voices to hear Olemaun's thoughts during a key point in the book
Poetry Writing		Language: Writing	<p>Students</p> <ul style="list-style-type: none"> wrote diamante poems to summarize their ideas, thoughts, and feelings related to Olemaun and the residential school system in Canada
Great Canadian Mail Race		Social Studies Language: Writing	<p>Students:</p> <ul style="list-style-type: none"> wrote letters to grade six students for the Great Canadian Mail Race researched schools in Canada to send letters
Culminating Task: Installation		Visual Arts Language Social Studies	<p>Students:</p> <ul style="list-style-type: none"> researched the history, significance, and symbolism of the Inukshuk learned about installation, post-modern principles (Gude, 2004), appropriation and cultural appropriation, and the relevance and appropriateness of creating an inuksuk researched contemporary installations engaged in critical analysis planned to create an Inuksuk identified the purpose of the installation (as an homage to Olemaun, a symbol of protection to guide her way home, a

			<p>reminder of her heritage and identity, a memorial for all the children who suffered and continue to suffer as a result of a residential school experience)</p> <ul style="list-style-type: none"> • created individual paper mache stones • wrote their poems on their stones • collaboratively assembled the stones into a large inuksuk for installation
Ongoing Reflective practices	Consideration of senses as applicable	Language: Writing and related subjects	<p>Students:</p> <ul style="list-style-type: none"> • reflected daily throughout the unit and in a final reflection

3.4.4.1 Summary of Arts Experiences

The teacher and I integrated explicit sensory-based strategies (looking, listening, tasting, smelling, and feeling) during process and performance work in drama and dance, visual arts, and writing. Visual Arts work included drawing to music, dancing to art, partner-drawing a story, drawing to a spoken word poem, texture explorations, researching and creating a culminating, collaborative post-modern installation. Written work included the development of soundscape scripts, poetry, expository paragraphs, dramatic letters written in role, and exploratory reflections. Performance based events included storytelling and listening techniques, dance and soundscape work. These processes were recorded to facilitate analysis of the level of engagement and comprehension demonstrated by the groups as they worked and performed. The recordings also allowed the teacher and me to observe the audience's responses during the sharing. Students referenced the *creative process* and the co-created success criteria, which were posted on charts on the wall. They referred to the charts while they engaged in their work, as they gave one another feedback, and during reflection. Audience feedback was a useful indicator of the students' attention, grasp of concepts and formal techniques, as well as

group and social skills. During each visit students had opportunities to reflect on their own and others' work. These reflections and different ways to share their insights became an integral element to the process. The students' confidence and ability to articulate and share their ideas improved through practice. Through the sensory arts work students made discoveries and cultivated their insights. They learned that their individual ideas had merit and that their ideas were interesting to others. They learned to appreciate the insights and ideas of others, whether the ideas were similar or very different. Placing the sensory learning of the student as a central focus created an opportunity for deep engagement.

I was present to co-deliver and observe during ten classroom sessions. In between visits the teacher was willing and motivated to implement the sensory based programming as it authentically became woven into the programming. Specific classroom experiences that occurred were: drawing to spoken word, texture exploration, and the dramatic convention of corridor of voices based on their writing in role. The teacher also led the poetry and paragraph sessions based on our planning. In these cases we spoke on the phone or communicated by email following the lesson so the teacher could share his perspectives on the student responses. I followed up on my subsequent visits by speaking with the students and gathering copies of the resulting art and writing samples from the students who had given consent and permission.

3.5 Materials: for Sensory Based Arts Lessons

I developed most of the materials used for the lessons implemented in the class in consultation with the participating teacher. We planned that once the project was in progress the teacher would continue to connect the ideas of sensory-based arts pedagogy between my visits. The teacher and I assessed, planned, and developed lesson plans and materials as necessary in between visits. I offered an opportunity to collaborate via Google-doc but the participating teacher preferred to create plans in person, over the telephone, and occasionally via email. All lesson plans were created specifically for the project. Portions of the few lessons that were adapted from other resources are credited as appropriate.

3.6 Instruments: Data Collection Materials

I developed the data gathering instruments during the proposal phase of the research project and shared them with the participating teacher so he understood my approach. After researching several methods of recording classroom observation data and not finding the perfect instrument to suit the needs of the project, I created an instrument that was customized to the study. I researched several observation tools and created my observation template (Appendix J) to satisfy the needs of the project. This tool is not directly based on any of the templates that I investigated. I wrote the interview protocol during the proposal phase. The teacher received each of the three interview protocols (Appendices J, K, L) prior to the interviews to have time to consider his responses and to generate his own questions and ideas.

3.7 Data Collection Methods

Data were collected from three main sources; interview, observation and student work samples. The purpose of the multi-method approach of data collection was to provide triangulation and describe the qualitative data more fully to ensure my selected observations were supported by the teacher's perspective and the students' work and reflections. Using these data sources, I endeavored to maintain a consistent approach throughout the study by incorporating the same methods of gathering data on every visit.

3.7.1 Teacher Interviews

The interview approach considered the link to the theoretical framework and the research questions in developing the interview conception. Following the *Romantic Conception* of qualitative interviewing outlined by Alvesson (2003), interviews were responsive, interactive, and conducted in the extended conversation style in order to explore the inner world (meanings, ideas, feelings, intentions) of the participant (Alvesson, 2003). The conception was an appropriate choice as it aligned well with the topic of the research and the focused and in-depth design of the small-scale study. The Interview Protocols (Appendix K, L, M) outlined the main questions. For all interviews, I sent the protocol to the teacher a week in advance of the meeting to give him a chance to reflect and consider his responses. This also afforded us the

opportunity to have a more conversational *semi-structured interview* (Bold, 2012). Interviews were digitally recorded and transcribed. Additional questions emerged as the conversations flowed. The questions were framed by broad statements and then narrowed, following a natural flow of topic. I looked for depth and detail and asked for more detailed descriptions of examples or events to promote vivid responses. I listened carefully, searched for nuance, kept jot notes, asked follow up questions, and probed for clarity when appropriate (Rubin & Rubin, 2005). There were three interviews during the study (initial, mid point, and final) to chronicle the process and progress of the research over the three-month period (Roulston, 2010).

The first interview took place at the home of the teacher. The purpose of the first interview was to establish the background, expertise, and educational philosophy of the participating teacher. It was also to get a sense of the students' interests, needs, and overall classroom setting and serve as a launch to our planning. The session lasted approximately an hour and fifteen minutes. It was audio recorded and transcribed immediately following the session. The transcript was sent to the teacher the following week. Additional notes were taken throughout the interview as a reminder to follow up on particular points.

The second interview also took place at the home of the teacher. Questions were sent ahead. The intention was to carve out time for the teacher and me to look critically at how we began, how we felt about the progress, and how we should proceed. It was also an opportunity to address the strengths and challenges of the work and ensure that the direction that we were heading was still feeling authentic. The interview gave the teacher an opportunity to reflect on the work, identify challenges, and share his perspective on the differences between how he had taught the same content in past years in comparison to this year's work. Formal comparison was not part of the original study design but I was intrigued to hear the teachers' insights on the differences. I was thrilled to be able to draw upon the teacher's perspective and his professional opinion regarding how this study created the opportunity for engagement, depth of understanding, empathy, curiosity, interest and attention, and the meaningful connections that the students were making.

The final interview took place at my home and included member check and teacher reflection. Again, the questions were provided ahead of time. This conversation was an opportunity for

the teacher to reflect upon the successes and challenges of sensory-based approaches in the classroom, to corroborate the interpreted data, to consider the significance of the project for him as an educator and his desire to use similar approaches and strategies for his future planning, the impact of the project on the students, and how the sensory learning continued after the project was complete. The interview method includes informal conversations I had with the teacher throughout the study as well as the three main interviews that occurred throughout the project.

3.7.2 Observation

During observation I attended to examples of engagement that were relevant to the particular class but that could still be considered generalizable. Using my observation template (Appendix I) I focused on particular examples of engagement and related sensory and arts indicators during a variety of sensory arts experiences. Engagement categories included body language, facial expression, quotes, emotional connection, interest and attention, curiosity, understanding, motivation, active learning, and perceived importance. I also had sections to indicate how the learning related to senses, personal focus, and community focus as well as sections to note programming and integration opportunities. Observations included digitally video recorded classroom visits. I recorded approximately one third of the visits, which totaled over ten hours of footage. During observations in class I took notes by hand and on the observations templates and wrote reflections following the visits. On the days I facilitated I had the template on hand and worked with it once the students were occupied individually, in partners, or in groups. For most visits I set up my computer in a corner to record a portion of the class as an additional method to gather data. Approximately one third of the lessons were recorded. I knew that there would be many brilliant creative moments and subtle demonstrations of engagement or non-engagement that I would miss during class time, especially if I was facilitating. I also talked to the teacher following every class to get his perspective on the engagement of the students, and to share any additional insights he had on the learning or next steps.

3.7.3 Work Samples Generated by Students:

I photographed the two and three-dimensional work and photocopied samples of writing with permission from the participating students. Student work samples included writing, drawing, response charts, preparation notes, performance based work in drama and dance, creative, narrative and expository writing, and reflections. Table 3.2 outlines student work.

Table 3.2 Student Work Samples

Visual artwork	Performance based work	Writing
<ul style="list-style-type: none"> • Drawings to music • Drawings/paintings to <i>Monster</i> poem by Dennis Saddleman • Partner drawing – retelling a story • Collective role on the wall 	<ul style="list-style-type: none"> • Storytelling (multiple methods) • Soundscape • Dance element explorations • Character Dance pieces • Corridor of voices 	<ul style="list-style-type: none"> • Writing in role • Expository essay • Poetry • Sensory responses • Sense storm charts • Daily reflections • Letters
Culminating sculptural installation		

At the end of each visit the students responded on reflection sheets. In the initial plan, the students were going to reflect in their writing journals, however, I decided and the teacher agreed that it would be more useful to provide a format for these reflections. Rather than being faced with a blank page, I prepared simple templates that gave the students choice and open-ended prompts. These brief daily reflections served several purposes. The reflections:

- helped the students consider their learning and understanding
- helped the students articulate their learning and understanding
- provided a record of the students' understanding of the process
- provided additional information regarding the effectiveness of the sensory based arts learning strategies
- provided insight into the students' perspectives, attitudes and opinions
- allowed comparison from the beginning of the research to the end
- made the learning visible, which was especially useful when students reflected on ephemeral performance experiences that had no permanent record

3.8 Data Analysis

The teacher, students, and I interpreted meanings and engagement during the arts experiences through reflective discussions, which aligned the research focus with nominalist ontology. Individual consciousness and cognition were integral to the process and understanding. Following an anti-positivist epistemology, knowledge and meaning were regarded as personal, subjective and unique (Burrell & Morgan, 1979, as cited in Cohen, et al., 2011). In this project I was seeking multiple responses to the main questions and endeavored to explore the levels and layers of meaning that were generated.

The type of data (interview, observation, and student work sample) influenced and determined the focus of analysis. All verbal or written data were transcribed into the word files on the computer. These were then transferred into coding matrices that I devised to facilitate the emergence of patterns and themes. The coding matrix consisted of the various categories of student engagement (emotional connection, interest and attention, curiosity, understanding, motivation, active learning, perceived importance) as well as additional categories that related to the main research questions (type of sensory learning, personal focus, community focus, programming opportunity, arts programming integration, authenticity). It was useful to see how the different kinds of learning events tended to elicit particular responses as evidenced by the shaded bars across the reports.

During the analysis phase, I considered different ways of handling the data. My three main types of data (interviews, observations, and work samples) came from a variety of discipline focused and integrated lessons (dance, drama, visual arts, and writing) that highlighted senses (visual, auditory, tactile, olfactory, taste, kinesthetic, vestibular, interoceptive, and proprioceptive) and supported the three big research ideas (sensory focus, arts programming opportunities, and student engagement). The first stage was fairly clear. I re-read all the data thoroughly and use the matrix categories to help identify the themes that emerged. This revealed the connections and helped to generate the next level of synthesized data necessary for reporting the results.

I went through the data several times, each time finding evidence that would inform, advance or reject the premise guiding the main research questions. In order to manage this I kept handwritten notes and created a large post-it wall so that I could physically move the big ideas around in order to see the different ways they connected. This also helped me see the project from different perspectives and understandings and was necessary for me to find the final way I needed to organize the reporting of the data.

3.8.1 Analysis of Interviews

The transcripts from the interviews were transferred into coding matrices. I read the transcripts and noted how the teacher's statements significantly related to the research categories: Sensory learning; Arts programming; Student engagement. Using this as a starting point, I further attended to patterns, ideas and themes that emerged from these statements. For consistency, I also attended to how the teacher's statements related to the same categories within student engagement, adapted from Marzano and Pickering (2011) and the concept of *Flow* (Csikszentmihalyi, 1990) used for observations and student samples. Using the student engagement codes for the teacher interview did not seem particularly relevant at first but became most useful later during triangulation when the data were cross-referenced internally.

The teacher had taught this book in previous years, which provided an opportunity for him to compare the students' responses this year from past years. The original research design did not include a plan to conduct formal comparisons but the teacher and I discussed the differences during the second and third interviews. The discussions yielded valuable and unexpected data.

3.8.2 Analysis of Observations

I transcribed the video footage from each classroom visit. These data and the notes that I recorded on the observation template were transferred into the coding matrices, were read several times, and coded to find patterns and themes. Then the data that was gleaned from the initial data were grouped to correspond with the three main research categories informed by the research questions.

3.8.3 Analysis of Student Reflections

The data from the student reflections were transcribed. As with the observations, the reflections were read and re-read and entered into the coding matrices. The codes generated were applied to the next level of analysis. The student reflections provided an important layer from which I was able to cross-reference and validate the data.

3.8.4 Preparing Data Analysis for Reporting

Once the data were analyzed I created a chart and grouped lessons that were most representative of the findings within the three main research ideas (sensory learning, arts programming opportunities, and student engagement). This was particularly challenging because of the way the main research ideas connected and overlapped. The learning experiences were integrated across subjects and disciplines and the sensory work was embedded in the arts strategies. The approach and content impacted student engagement and the student engagement helped to inform the programming. After experimenting with different ways to report the findings (chronologically, by discipline, by subject, by data type, by sense) the clearest way to organize the analyzed data was to follow the research questions and the three main research problems: sensory learning, arts programming opportunities and student engagement.

3.9 Trustworthiness

All work with the students, including lesson delivery, observations and conversations took place in the classroom. Students who had parental permission were not removed from the regular classroom setting or separated for any portion of the research. The research methods and content were holistic in nature. The natural setting reinforced the validity of the learning experiences. I intentionally made efforts to ensure that the programming supported the work in the class so that the project was not seen as an add-on. The research methods and content were holistic in nature. There was more emphasis on processes than on outcomes.

Data interpretation was validated via member checks with the students and teacher on an ongoing basis and with the teacher during the final interview. The first two interviews and

planning sessions occurred in the home of the teacher in an effort to offer the most convenient location for the teacher and to ensure that we could work quietly for as long as we needed without interruption. The final interview took place at my home after the teacher had an opportunity to reflect on the work. Preliminary interpretations of the data were shared to solicit the teacher's insights as a way to support and confirm the trustworthiness of the interpretations. The sharing aimed to a) ensure that I was clearly conveying the teacher's meaning and nothing was misrepresented; b) provide an additional layer of trustworthiness and credibility, so that that I was not the sole interpreter of the data; c) encourage further conversation. The attempts to interpret the interpreted were clear and the levels and layers of hermeneutics were communicated.

Triangulation across the three main the types of data strengthened the results. I cross-referenced, matched, and found patterns within the multiple kinds of data to support the internal validity. All data were dated and categorized. A chain of evidence (Yin, 2009) provided the opportunity to trace the project from inception to conclusion. The data were analyzed inductively. Detailed, thick description of data was presented from the point of view of the participants. Supporting evidence was supplied from at least two of the three main kinds of data to establish the validity of the findings. The data and description are presented in such a way that others may replicate aspects of this particular case study (Cohen, et al., 2011).

3.10 Ethical Considerations

All aspects of the research were considered to be potentially sensitive. Protocols for participant's privacy were followed and safety, confidentiality, and ethical practices were a priority. The purpose of the study was clearly communicated to the participating teacher, students, principal, vice-principal, and parents who received letters of information (Appendix A), assent (Appendix B), and permission (Appendix C). All efforts were made to ensure that all potential participants were informed about their role in the process and felt comfortable with the expectations. The students were always made aware of the purpose of the work and all methods were transparent so that they felt involved in the process. The nature of the work promoted authentic and open conversations and encouraged honest responses. The teacher and students were encouraged to take creative risks to stretch themselves beyond their regular academic and artistic comfort zones. The data used for the project were generated from

students who had signed assent forms and whose parents had signed a written permission form. No statements or samples of work from students who did not give permission were included in the study and students kept all their original work. The confidentiality of the students was preserved and students' statements were identified by pseudonym initials throughout the reporting of the study. Strategies for this project originated from experienced interpretation of the Ontario Curriculum: The Arts and followed Ontario College of Teachers and the school board's codes of conduct.

In the next chapter selected lessons, processes, and learning experiences that were used to generate the data are described in greater detail. The results of the data analysis are particularized and supporting evidence from interviews, observations, and student work are included. Also in Chapter Four, the major themes and patterns that emerged from the data are introduced.

Chapter 4

4 Results

The purpose of this case study was to investigate the potential for sensory-based arts programming in a junior classroom setting and to explore the impact of sensory arts learning on student engagement. The study took place in a grade six classroom in an economically and culturally diverse neighbourhood in a large metropolitan city. As the researcher I worked collaboratively with the teacher in the class over a three-month period to integrate lessons so that the study and learning could fit seamlessly into his programming. The teacher and I planned together and took turns facilitating and co-leading the lessons. My ten visits were both full days and half days (mornings or afternoons) depending on the teacher's schedule and the amount of time needed to complete the in-class work. Approximately one third of the lessons, totaling over ten hours, were digitally recorded via my laptop set up in the corner of the room. Onsite observations were recorded by hand on templates (See Appendix I). Observations generated over 70 pages of transcribed data. Three interviews with the teacher were conducted at the beginning, at the midpoint, and at the conclusion of the study. The interviews totaled over three and a half hours and generated over 70 pages of transcribed data. Samples of visual arts, dance, drama, and writing were gathered and documented throughout the study. The twelve participating students generated artwork and over 50 pages of writing, and insightful reflections on their sensory learning, arts processes, and engagement with their own learning. All data were coded for emerging themes.

Throughout the unit of study the classroom experiences included explicit focus on the senses as well as more subtle integrations. Students were encouraged to pay attention to how their senses were engaged and how the awareness of their senses contributed to their experience and learning. Because I was working with a visual arts teacher I was fairly certain, and he confirmed, that he had done extensive work with the students on visual elements so our focus for the study was more on auditory, tactile, olfactory, taste, kinesthetic, vestibular, interoceptive, and proprioceptive senses. The lessons were designed to encourage students to interact with their learning on a visceral, physical level so that they could become immersed in the experience.

The purpose of this chapter is to summarize how the three main types of data (interviews, observations and work samples) generated from a variety of discipline focused and integrated lessons (dance, drama, visual arts, and writing) informed the three research problems (sensory focus, arts programming opportunities and student engagement). The data were analyzed inductively according to a matrix of categories detailed in chapter three. Additional levels of data were generated based on the themes and patterns that emerged.

To organize the reporting of the results, I return to the research questions: What opportunities for learning and engagement do sensory-based arts pedagogies provide for junior students? How might sensory-based arts pedagogies be best structured and positioned to provide relevant and meaningful learning opportunities to junior students? How might experiences that focus on sensory, mind-body awareness, and the imagination contribute to students' learning, engagement, and meaning making?

In the following, I use the data (interviews, observations, and student work samples) to support the emerging ideas within the structure of the three research problems identified throughout this study based on the original research question and sub-questions. Student quotes from reflections are included. I have used pseudonym initials to differentiate the students' responses.

Table 4.1 provides an overview of the learning that the teacher, students, and I experienced together over the course of the project. Table 4.2 is the structure that I used to organize and report the data by describing the events that supported the main research questions and research problems; sensory focus, arts programming opportunities, and student engagement. Data were organized in this chart in point form and then elaborated upon using thick description, observation, student samples, and teacher and student quotes.

Table 4.1 Chronological Classroom Events by Sense, Subject, and Discipline

Event	Description	Data Type
First Classroom visit	<ul style="list-style-type: none"> • Introduced project • Distributed forms to students 	Observation
Engagement & Flow	Introductory Power Point	Diagnostic student responses
Sound	<ul style="list-style-type: none"> • Hearing exploration • Listening skills in partners (several short exercises) • Movement • Introduction to soundscape • Drawing to music • Throat singing • Monster poem (used in culminating presentations) • Reflections 	Observations Student work sample
Student soundscapes	<ul style="list-style-type: none"> • Creative collaborative group work • Reflections 	Observation Student work sample
Dance	<ul style="list-style-type: none"> • Moving art • Introduction to elements • Mirroring explorations • Shadowing explorations • Flocking imagery from <i>Fatty Legs</i> • Reflections 	Observation Student work sample
Dance	<ul style="list-style-type: none"> • Moving story • Character discussion • Role on wall • Group movement phrases • Reflections 	Observation Student work sample
Taste awareness	<ul style="list-style-type: none"> • A matter of taste: The blueberry meditation • Reflections 	Observation Student work sample
Smell awareness	<ul style="list-style-type: none"> • Olfactory sense: Smells like... • Responding to Five Smells • Reflections 	Observation Student work sample

Textures	<ul style="list-style-type: none"> • Feeling the curriculum through texture • Reflections 	Student work sample
Sense Storm	<ul style="list-style-type: none"> • Language • Group work • Reference charts for expository essays generated by students 	Student work sample
Language writing	Expository essay (used in culminating task)	Student work sample
Drama	<ul style="list-style-type: none"> • In Olemaun's shoes • Writing in role • Letters home • Corridor of voices 	Student work sample
Writing	Diamante poem (used in culminating task)	Observations Student work sample
Visual Art Culminating Task	<ul style="list-style-type: none"> • Researching Inukshuk • Postmodern appropriation • Installation • Critical analysis • Creating individual stones, including painting and adding poems • Art installation: creative, collaborative, group work 	Observations Student work sample
Final reflection	Students reflected on the entire project	Student work sample

Table 4.2 Data Organized by Research Problems

Section 1	Section 2	Section 3
Sensory Focus	Arts Programming	Student Engagement
Description of learning experience:	Description of learning experience:	Description of learning experience:
Supporting evidence: <ul style="list-style-type: none"> • Observation • Interview • Student work sample 	Supporting evidence: <ul style="list-style-type: none"> • Observation • Interview • Student work sample 	Supporting evidence: <ul style="list-style-type: none"> • Observation • Interview • Student work sample

Within the broad research problems of sensory learning, arts programming opportunities, and student engagement the data revealed common ideas and themes. These included authentic connection, integration, power of working in role, creative freedom and autonomy, attention and focus, and intrinsic motivation. I analyzed over 200 pages of transcribed observations, interviews, and samples of student writing and artwork. It was challenging to select only the learning experiences that best represented each distinct research area because the lessons were deeply integrated and there were many overlaps across categories.

4.1 Results: Sensory Learning

In this study I worked with the teacher to facilitate explicit sensory arts approaches in the classroom to study programming potential and possible impact on student engagement. The teacher stated that sensory approaches had always been of interest to him but he was never sure how he might implement them in the classroom.

I have always been interested in the senses as a creative person myself. I love all the arts and I love all the senses. They are two different things but they are so connected ... I just needed someone to show me how this is possible and seeing the difference, like seeing if it is worth it (Teacher, Interview two, 2015).

The study provided the teacher with inspiration and practical strategies to envision how an explicit approach to sensory learning could be integrated into the language and arts work he was already doing with his students to extend the work further.

The way we've taken the novel that we are reading and made just the whole experience of reading the novel and getting to know the story and the experience of these people... I think we really made it meaningful for the kids... More-so than in past years cause I've done this book in past years but it has never been quite like this... sensory based learning made the novel go from a flat book to a real life experience (Teacher, Interview two, 2015).

The teacher reported that he would like to take a similar approach when he teaches the same content next year and that he was motivated to incorporate similar approaches and strategies into other areas of his program.

...makes the subject or what you are learning more relevant, or it really makes the learning more authentic and I feel like they really actually learn. As an educator even after the project ended I went back to the

senses through the arts and tried to use that still in what we were learning because I know that that somehow makes - there's a connection there with the kids and what they are learning ... I think this could be successful if you integrate it with your subjects - your curriculum this can be a successful way to teach - it really can be - if you are just out of the blue doing a lesson on smell it doesn't make sense to the kids but if you can connect it to what they are learning it just makes the kid closer or more connected to the subject matter (Teacher, Interview three, 2015)

My first two visits to the class were both in the afternoons. I observed that it took some time for the students to settle in to focus when returning from lunch. On the diagnostic day it took seven minutes for the teacher to be able to begin the lesson. The teacher had a positive rapport with the students and a high tolerance for students calling out. I determined during this observation that I wanted to begin working with sound, specifically hearing and listening skills.

4.1.1 What? The Auditory Sense

Sound was the first sense that the teacher, students and I investigated in the classroom. The learning was spread over three visits on three different days because of the scope of the material to cover. On the first day the context was introduced and the students participated in several exercises that helped them explore, discover, and practice their listening skills. The intention was for the first session to begin in total silence so that students could listen carefully to the environmental sounds. Instructions were given by the teacher and me in the hall and were written in point form on a large chart in the room. Students entered the classroom a few at a time and were prompted to listen carefully and consider the qualities of the different sounds. The teacher informed me that the students were not accustomed to working this way so it took a few minutes for some of them to settle into the lesson. The teacher and I encouraged them to listen by using body language, gesture, proximity, referring to the chart on the wall and whispering when necessary. Students identified chairs creaking, breathing, shoes scuffing the floor, whispering, giggles, the teacher next door, cars driving by, etc. "This is important because we should every once in a while practice our hearing awareness. This will help us relax. I think it is really important" (G.C., Student reflection, 2015). The students also practiced a series of brief communication exercises that were designed to sharpen their

awareness of sound vibration, volume, tone, articulation, facial expression, body language and gesture. “I think that hearing and listening helps me communicate and helps me stay relaxed” (G.G., Student reflection, 2015).

Throughout the lessons students were provided opportunities to learn, identify, and explore various components of communication, including the range of attention and the internal monologues that often occur during a conversation. We addressed the topics of social cues, asking questions, critical thinking, judgments, memories, and personal associations. The students seemed genuinely interested and keen to articulate their ideas. They recognized that what they were learning happens to them regularly, but they never had the opportunity to talk about it before. They were surprised that other people had similar experiences. The focus was on positive and active listening skills. When it became necessary we also deconstructed what happens during interruption and the need for impulse control. This was challenging work for the students and at one point they lost focus and became disruptive. The teacher stopped the lesson and addressed their behaviour directly. I observed that this teacher was very thoughtful and extremely respectful of his students and their feelings. He demonstrated a high tolerance for noise and disruption in the classroom. He said that he was glad that we were doing this kind of work because they were in great need of developing their listening skills. I think that my presence as a guest in the classroom and the specific nature of these particular lessons may have caused the teacher to see the students through a different lens. He encouraged the students to embrace the opportunity to expand their ideas and participate fully in this learning. As part of the lesson the students created success criteria for positive active communication based on their work. This was the first of our active sessions together so I was not surprised that the behaviour of the students became rambunctious. It takes time to become accustomed to a new approach to learning. I also noticed that the more they practiced new strategies and we deconstructed the process, the more invested they became. For example, in a partner activity, one student told their partner a story and the partner’s job is to retell the story back using only movement. The first time they tried the activity there was a lot of chatting and silliness. Then, after we debriefed the challenges and possibilities they started to pay more attention to the choices they were making about what was most relevant in the story. They slowed their movements and conveyed mood, using facial expressions and gesture. The work became more

focused and effective. “It was cool how you had to make up a story and present it in a different way” (C.B., Student reflection, 2015).

The students identified a variety of listening challenges and how they worked through the challenges. They made observations about how they had difficulty hearing their partner when the room was so noisy. They solved the problem by adjusting proximity. “When we were telling stories to our partner, but everyone was talking loud, and then some people were talking louder. I worked through it by turning my head and getting close so my partner could hear me” (G.G., Student Reflection, 2015). When they were talking back to back, they could not see the facial expressions and the sound was directed away from them. They also discovered that if they all lowered their voices rather than raised them, they would hear more effectively. Most students appreciated the variety of ways they were given to tell and listen to their stories. It gave students opportunities to share a variety of experiences, “I liked hearing what happened to my partner that morning or when they were little” (G.G., Student reflection, 2015).

On the afternoon of my third visit the students engaged in a partner-drawing retell of the events in their novel study. The teacher and I observed that the students became engaged and animated. We were thrilled to see how students demonstrated their understanding in different ways. The activity provided an opportunity for the students to challenge one another about the significance of various events and characters in the book. In the lesson partners worked together to retell what they understood about the story by drawing together on a large piece of paper (see Figure 4.1). The body language, lively talk, and focused drawing indicated students were invested in this process. They explored and expressed what they knew through the combination of writing, drawing, listening, and speaking. The visuals helped them to articulate their ideas and promoted the use of metaphor, a concept being taught in the language program. The teacher was really pleased to *see* and *hear* how much they had grasped and the different interpretations of the story that they had been studying together. The activity was open for interpretation. Some drew symbols, figures, settings, and images and others created maps. Working in partners with the large format drawing helped promote sharing, interpretation, and diverse opinions and understandings. Students considered the work in more depth and made new discoveries. They were physically immersed in this experience and were eager to share what they had drawn. A student said of this activity, “it made the work more interesting and it

made me think of things I never would've thought of" (G.H., Student, Final Student Reflection, 2015). They made sophisticated inferences and articulated their understanding differently than they had done in their previous written responses. The teacher noticed that during the partner drawing activity the students' responses were far more insightful than they had been when they responded to the novel study by only answering questions in written form. He stated,

During our drawings of the stories, partner drawing, listening, retelling, I could see how interested that the kids were in the story and we felt that through this work we would have a lot of depth where we could really take the arts and the sensory learning and we could really understand what happened to these children through this character and boy am I glad we did that because I have never had an experience teaching that book the way I did this year - so it was fantastic (Teacher interview three, 2015).



Figure 4.1 Students' Partner Drawings to Communicate Events from Novel

The lesson revealed that allowing the students to speak, listen, expand on the ideas of others, and physically interact by drawing at the same time was very effective for both their engagement and their depth of understanding. It was fascinating to see the visual representation evolve as their understandings both expanded and deepened. They were free to express and explore the story. It was enjoyable for the students, "I liked drawing the summary of *Fatty Legs*" (B.B, Student response, 2015).

Conducting these activities and encouraging the students to reflect revealed that they understood and could identify several good reasons for listening. "The activities made me think that it is important to think about every detail and always listen to your surroundings" (G.B.,

Student reflection, 2015). Students identified academic and social reasons for listening, “It’s really important to hear and listen because that’s how you communicate... if you are talking to someone you should listen to what they are saying” (G.B., Student reflection, 2015) “If I am a good listener I will pull important information from a lesson or a story. I will also be a better person if I am a good listener. I will have lots of friends” (B.B., Student reflections, 2015).

The teacher agreed that this essential skill and could be introduced at the beginning of the year. “I think right at the beginning of the year would help them. I could say it in a selfish way so that they would be nice and quiet and sit there and listen to me, but it’s really not about me. It’s really for them (Teacher Interview three, 2015).

Another activity that was successful in this listening series was when the students drew to music (see Figure 4.2). Students responded to three very different pieces of music on three large sheets of paper. They responded to this activity immediately and were completely immersed. It could have gone much longer. We revisited the work a few days later when we replayed the music and the students wrote descriptive words to accompany their drawings. This activity was an excellent preparation for the *Monster* Drawings (see Figure 4.3) that the teacher facilitated the following week. When the students were asked to reflect on the activities related to sound, drawing to music emerged as a favourite. The students identified that freedom and that autonomy were important to them, “My favourite classroom experience was when we drew to the music. We got to be free and we were not told what to do but we could draw in the flow” and “...we got to drift free with our imaginations and draw freely” (G.H., Final Student Reflection, 2015). They also demonstrated awareness of transferring from one art form to another, “My favorite classroom sensory experience was drawing to music. I liked this because I like drawing and I like music so I think it was sort of fun to channel the energy from the song into our art” (G.H, Final Student Reflection, 2015). Students articulated the importance of meaning in art, “...made me think about what the music really meant”, the spontaneity, “interesting to draw just by listening” (G.C., Student reflection, 2015), the individual expression, “you get to describe what you are hearing the way you are hearing it. Other people might hear sound differently than what you are hearing” and the enjoyment, “so I think that part was fun to draw what we felt and express our feelings” (G.D., Student reflection, 2015).



Figure 4.2 Samples of Student Drawings to Music

Students also used the listening skills that they learned and practiced to respond to the spoken word poem, *Monster* by Dennis Saddleman (2000). The teacher encouraged the students to listen and draw from their hearts.

... then there was listening - just being able to focus and being able to listen to sound and then I experimented with sound and listening with that poem, *Monster* - and it was really based on what they were listening to and not necessarily - even though I am a teacher - I wasn't really caring about comprehension or anything I was looking for emotion - what kind of emotion - listening to this man - listening to him - what he is saying - what - how are

you feeling - how does that make you feel about this whole this experience of residential schools? (Teacher Interview two, 2015).



Figure 4.3 Samples of Monster Drawings by Grade Six Students

4.1.2 A Matter of Taste: The Blueberry Meditation

Eating meditations can be found in several meditation texts. I adapted the eating meditation, based on a strategy found in, *The Way of Mindful Education* (Rechtschaffen, 2014). The meditation is usually done with a raisin or grape. I created the script (Appendix F) for the teacher using a blueberry to connect the exercise to Olemaun, the main character in the story, *Fatty Legs*. The purpose of the activity was to encourage the students to slow down the process of eating and pay close attention to the details of what happens at each stage. Students followed the prompts, engaged in dialogue, responded individually on personal charts, and shared their experiences with others in the class. The students were very lively during this afternoon session. Once they settled to focus on the activity their insightful responses included identifying what happens in the mouth as it prepares and anticipates if the taste will be sweet or

sour. They also started to make personal connections and drew upon memories and other physical sensations that they experienced. We shared the experiences by talking, drawing, and free-writing to help the students find words and phrases to adequately describe these sensations. It was the first time eating a blueberry for a few of the students. Some students were very patient and others had difficulty waiting to eat. Students recognized that they often took the act of eating for granted and they seemed to gain a new respect and appreciation for food and how it interacts with all their senses, not just taste. The teacher reflected on the lesson, “I think that helped validate what we were doing - to say, this is important. Take time to really observe what is going on when you are experiencing this particular sense. I think doing that lesson validates the sense” (Teacher interview three, 2015). Students recognized that it would not be necessary or practical to eat this way all the time but they appreciated the opportunity to really explore something that they did daily and often mindlessly. A simple activity elicited thoughtful and insightful responses. “I think my favorite part was when we got to taste and kind of closely investigate. It felt like we were detectives and we were just on a blueberry. It was fun tasting and testing” (G.D., Final Student Reflection, 2015), “eating mindfully is different from how you usually eat because you really get the chance to dig deep into how it looks, the texture, how it tastes and you get more full when you eat slowly” (G.A., Student response, 2015), “If we explore all the good features about the food we eat mindfully, that will make it taste better to us” (B.B., Student response, 2015), “I usually eat and only notice taste and not anything else” (G.G., Student response, 2015), “it makes you realize how good some things you're eating are ... makes you actually taste it” (G.H., Student response, 2015), “I could eat healthy food more mindfully so I can enjoy it and want to eat more. That would make me more healthy” (B.B., Student response, 2015).

The teacher and I encouraged the students to realize that the investigation was about more than just taste through our prompts and questioning so they could connect the experience to their learning and other aspects of their lives. They were asked if they could apply the ideas and consider what else might benefit from slowing down and becoming more aware. Their responses revealed a range of insights, “Maybe looking at objects more closely, we will enjoy those objects more and not let them go to waste” (B.B., Student response, 2015), “If you look really closely everything is super pretty or cool” (F.G., Student response, 2015). “Dance might benefit by slowing down. I could learn the steps better and put different steps together easier”

(G.C., Student response, 2015). One student remarked, “Time. People don't realize the time is literally flying away. It should be noticed. So instead of doing bad things, maximize your time” (G.H., Student response, 2015). Students were also encouraged to draw during all reflective activities. At one point during the lesson a student looked up at me and asked if we were going to dance the blueberry.

4.1.3 The Olfactory Sense: Smell's Like...

For this lesson I gathered smells that were indicative of odors that Olemaun, the main character in the story, may have encountered. I was curious what associations the students would make. Each group of students was given five small, labeled cups that contained samples of a range of scents. Students were very excited and curious to know what the mysterious smells were going to be. Each group of students received scent response charts (Appendix G) and samples labeled A to E. The instructions were to take turns smelling the various sample containers and then choose one to respond to on their chart. The intention was to participate in the experience and record the responses to the smells to use as raw material for poems, drawings, paintings, sculptural pieces or dance. We encouraged students to write words, phrases, sentences and/or draw for each section on the chart, which included thoughts /ideas, physical feelings, emotional feelings, colours, shapes, lines, sounds, other connections, and what they would name the smell. The chart was designed to access literal associations and encourage imaginative connections. The scents prompted a variety of responses. They triggered memories, activated imagination, elicited ideas, and sparked debate. There were a few scents that the students recognized and others that they could not identify. Observations and student charts revealed that each student was invested in the process and articulated immediate, intense, insightful, and imaginative responses to the various scents. The energy in the classroom was palpable and the students were extremely engaged and excited to share their responses. Phrases uttered included, “Which one are you writing about? ... I like that one ... smell this ... oh I love it - its mine ... that's one happy smell ... ew, that's gross ... I love that smell ... ya, whoooh!” They identified where they felt the smell, “where do you feel it?... It feels cold at the back of my head ... In my eyes ... it's really strong”. Written responses included, “In the back of my tongue. It feels like something is coming out of my ears” (E.G., Student Response, 2015) and “Sharp, hard punch, I

feel it in my forehead” (B.B., Student Response, 2015). Students shared memories, ideas, and experiences with one another and wrote, “When I was at the beach and the smell of seaweed also reminded me of a rainy foggy day” (G.A., Student Response, 2015). Another memory was shared, “Breakfast with grandma” (C.B., Student Response, 2015). They considered what sound it might make, “flaps clicking” (C.B., Student Response, 2015), “crackling sound” (G.D., Student Response, 2015), “someone breathing” (B.D., Student Response, 2015). Their personal associations and connections demonstrated thoughtful and imaginative participation in the process. Students were also given the opportunity to explore how the smell might look in terms of colours, shapes, and lines (see Figure 4.4) and wrote, “sharp”, “jagged line, cracked lines”.

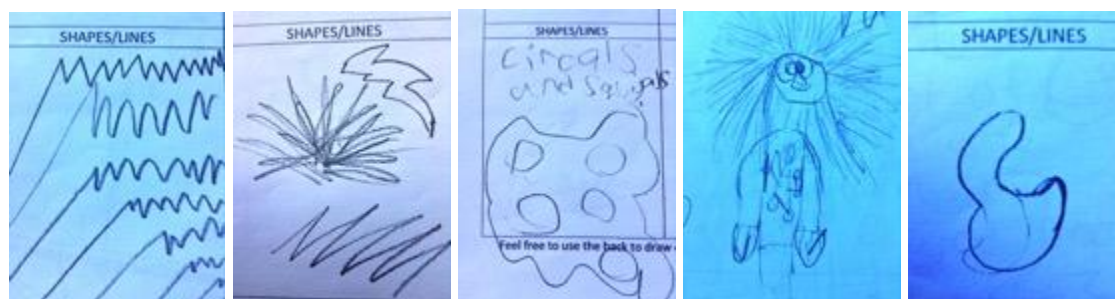


Figure 4.4 Students' Visual Responses to Smells

The teacher reflected on the experience. “Smell was a big one - when we did that... but the way we did it, we connected it to what we were doing - so like when we did the smells - trying to get the smells that Olemaun would have in her life - I think that makes it relevant (Teacher, Interview three, 2015).

4.1.4 Feeling the Curriculum Through Texture

The teacher and I designed this learning experience together. Due to a scheduling conflict I was not able to be present for the facilitation. The texture lesson followed the same structure as the olfactory lesson. The teacher gathered five different textures related to *Fatty Legs*. The students explored the textures at different tables, responded to specific prompts, and wrote reflections (Appendix H). The teacher reported that the students understood the context and structure because they had experienced a similar lesson and they responded easily and with great interest

and involvement. “My favorite experience was the textures at the stations with the fur and the ice and more” (C.B., Final Student Reflection, 2015). “My favorite classroom sensory experience was feeling the textures of things in her life because I connected the most when we were doing that” (C.B., Final Student Reflection, 2015).

The texture lesson was also an opportunity to establish that it did not matter who facilitated. The interest and engagement of the students was rooted in the approach, the material, and in their sensory connection and creative freedom. It was their learning, their feelings, and their responses that immersed them in the experience.

It’s not me or you. It’s incorporating *them* into what we are doing. It captures them because it’s their hearing, their sight, their feeling, their touch. So it’s bringing their sense into that subject that connects them I think. So, the times that we did - with the social justice stuff and discussing novels and using the sense as a way to travel and discover these books - is a wonderful tool it is just a wonderful way of learning (Teacher, Interview three, 2015).

4.1.5 The Effects of Sensory Learning

The more the students experienced the various sensations in their bodies, the more they were able to empathize with the character and use their imaginations to connect deeper to her life and circumstances. Through each experience they became more absorbed in the book, the character, the culture and the issues “... we have managed to use the senses to create this fuller comprehension of, in our case, Olemaun’s experience. I think has given the kids an experience they won’t forget” (Teacher, Interview two, 2015). Students wrote, “sensory learning is different from regular school learning because in school you write with a pencil and paper ... with sensory learning you get to explore all the senses and use them to learn” (B.B., Final Student Reflection, 2015).

The idea of sensory learning is usually associated with personal, interior experiences. Our sensory learning focused on interior experiences but our learning was also very open, social, and community-based. The students recognized how we share common ideas, and remarked that the learning “is different from how we usually learn because we usually learn on paper but

with sensory learning we are interacting and learning with our friends. It teaches us the subject and we develop our social skills” (G.H., Final Student Reflection, 2105).

In preparation for their essay writing, the students worked in groups to generate detailed charts in an activity that we named the *sense-storm* because it reminded us of brainstorm and body-storm. Each group was responsible for finding evidence of sense in the book, *Fatty Legs*, and posting it on chart paper. The charts remained on display in the classroom to support each student as they wrote expository essays. The essays explored how the author of *Fatty Legs* effectively used the senses in her writing. Students used the information on the charts to support their argument about the sense that they felt was the most compelling in the story. They demonstrated commitment, interest, and emotional connection during the research sessions and in their writing.

The sensory investigations laid the groundwork for the explorations in the arts curriculum related to the novel study and social studies. The work also reinforced the premise that people learn, feel and access ideas, memories and make connections in many ways. The students became involved in the sensory experiences and made insightful observations. They reported that the sensory approach helped them in school because, “It made me more focused. It also made me work better because I would let loose and be free with my work” (G.A., Final Student Reflection, 2105). Students identified empathy for the character and her circumstances. “Sensory learning brought me closer to *Fatty Legs*. Using senses really connected me to the book and really feel for Olemaun” (B.B., Final Student Reflection, 2015), “Sensory work made me understand the pain that Olemaun went through” (B.B., Final Student Reflection, 2015). Themes that the students identified were creativity, uniqueness, and autonomy, “Sensory learning is different from how I usually work because you can be creative and unique with what you do and have fun. Also you can do what you want to do and not be told what to do” (G.A., Final Student Reflection, 2015). They appreciated that sensory learning offered a different experience. “The sensory experiences affected my engagement in school by showing me a different way of learning and making work fun. It made going to school and participating more enjoyable” (F.G., Final Student Reflection, 2015).

The teacher and I discussed the difference between having the students actually explore the senses versus considering the senses by talking or looking at them on a strictly metaphoric or imaginative level in relation to the character, the story and the broader issue. We both felt that it was well worth the time and effort to physically immerse the students into the sensory world of the character, as much as was possible, so that they could experience their learning in multiple ways and make previously unexplored connections. The senses are how we interact with the world (Dewey, 1934; Eisner, 2002). “Sensory learning is different from how I usually learn because it is more hands-on and fun. It's not just sitting and I really get to express my feelings” (F.G., Final Student Reflection, 2015). Once sensory awareness was activated, it was possible for the memories, thoughts, feelings, imagination, and metaphors to be accessed and expressed in multiple creative ways (Gamwell, 2005; Hubbard, 2007). The sensory lessons prepared the students to be receptive to learning in a number of different ways even after our unit of study was complete, “I feel like we have done the stepping-stones. The kids are primed. Now when we say, ‘what smells would she encounter?’ now they don’t think that is a funny concept. I want to talk about all those senses” (Teacher, Interview two, 2015).

4.2 Results: Arts Programming

Along with the selected activation of senses as described the students participated in arts experiences designed through a sensory lens to integrate seamlessly into the Language and Social Studies curriculum in the grade six classroom. The following arts experiences were selected to help describe the potential of sensory-based arts programming:

4.2.1 Student Soundscapes

The students worked together to construct audio art pieces to create an atmosphere and tell a story. They learned elements, skills, and techniques for creating sound atmospheres and researched through their book, *Fatty Legs*, to find inspirations and sources for their dramatic soundscapes. Students were motivated to research and explore the different sounds suggested by the first three chapters of the story. The students used the techniques that they had learned to create the soundscapes. They used events and atmosphere from the story to create sound scripts. They worked in small groups to simulate the sounds using vocalizations, body

percussion, and found objects. They followed the creative process, experimented and explored, reflected, revised, edited, practiced, and polished their soundscapes. Groups of students performed their soundscapes for one another. Audience members listened once to experience the atmosphere and story that had been created, and a second time to identify formal and creative elements, engage in peer feedback, and to express their impressions. It was fascinating to hear what the students thought was important and how they interpreted the sounds. The students took the process seriously and worked diligently to simulate the atmosphere. They learned techniques and discovered their own ways for creating unique sounds. The students reflected on the experience of creating, performing, and listening to their peers' work. The soundscapes provided students with a different way of considering the story and gave them a specific purpose for close reading of the text. "It made me look closer at the book" (E.G., Student reflection, 2015); "I think it made us understand the story more by going into the story more and getting into the parts that we don't really pay attention to" (G.C., Student reflection, 2015); "I think this made me understand the sounds that I never thought of in the story" (Student reflection, 2015). The performing students showed and shared signs of excitement, nervousness, and pride with their performances. They were very positive, helped one another, and demonstrated effective group skills. The audience members were very respectful. "We did pretty good and it was easy with everyone being silent" (F.G., Student reflection, 2015). For such a lively and verbal group I was very pleased and surprised to witness the commitment they displayed. The teacher was also very impressed with how the students responded to the lesson and the impact of their work.

I thought, what a great way to get them to read the chapters and make sure they are actually reading the whole thing and understanding, even the setting of the story. I thought that was a great way to do that...they were picking up sounds of the boat and sounds that I didn't even think of but that's how close they were reading to pick up what in this setting is making sound. (Teacher, Interview two, 2015).

Self-assessments were thoughtful and revealed that the students felt quite invested in the process. The students reflected on the power of the work and articulated empathetic responses and a deeper understanding of the story, "these soundscapes really made me feel how tragic

Olemaun's story is. She had so much hope and then it was crushed" (F.G., Student reflections, 2015).

I observed that the students were invested in the work. I sensed that their engagement was both because they were exploring the work in a sensory way, and simultaneously, the story and topic had affected them quite profoundly. Reflecting on this I wondered if the students would have had as much investment in a soundscape that was not related to the topic of their book.

The result of this exploration was a very clear decisive point in the direction of the classroom planning and for the study. Both the teacher and I saw the creative and engagement potential of focusing the work for the project on an integrated arts unit based on their novel study. This helped our planning, the focus for the students, and the study because we were able to work more in-depth. Using the story as a base, we found the potential for several meaningful and authentic connections for the classroom experiences and for the study.

4.2.2 Moving Story: Dance

I incorporated movement into every learning experience. During the Moving Art activity the students participated in a series of brief explorations of movement in response to different fine art images. I got a clear indication that the students liked to move, that they would respond well to a variety of movement experiences in the class, and we could explore the kinesthetic, vestibular, interoceptive, and proprioceptive senses.

They enjoyed the lively Moving Art improvisation activity and even the students who were nervous about movement began to demonstrate that they were less inhibited when they realized that they had creative freedom and they could dispense with any fear of failure because they could not get it wrong. "My favourite was dancing to what we saw on the picture because it was just dancing and moving to a rhythm that is not right or wrong" (B.A., Student, Final Sensory Reflection, 2015). I used the activity and the debrief that followed as a diagnostic to determine their general dance knowledge and their dance experience and background in educational dance from previous years. The teacher and I discussed the different challenges of working in dance in the classroom. I know after working with many different students in dance, that they need time to let go of fear and self-consciousness. Many students (and teachers) come

to educational dance with a preconceived notion of what dance is supposed to be and they are not comfortable moving their bodies. Discomfort manifests in different ways. It takes time to truly shed the judgment and understand the purpose of dance in education and how the body can be used to explore, learn and express. This relates to the importance of providing students with opportunities to practice sensory awareness, so they can discover powerful connections and understand new ways of interacting with the world. The teacher and I discussed the learning process in dance and how connecting the dance work to the story was effective,

Doing the warm up exercises helps - It kind of lets them be goofy and lets them be silly and then when we would actually be doing the activity that was connected to *Fatty Legs*, the goofiness kind of let off and they, also in their minds, this is serious. This is the book we are reading here, we have to focus (laughing) so I think that helped in a way” (Teacher Interview two, 2015).

I prepared a general introductory dance lesson to familiarize the students with the elements and we related the elements of dance with the elements of visual arts and music. Students participated in several exercises to increase their comfort in meaningful movement and to give them a vocabulary to use as they created and watched others. Students explored formal elements to become familiar with movement vocabulary and worked through the body to go deeper and find emotional meaning and context. “Sensory learning is different from how I usually learn because we got to use our bodies to do work and we used more artistic-based learning” (G.B., Final Student Reflection, 2015). Both the teacher and I agreed that students demonstrated understanding of the concepts they were learning in language through arts integration. In this work we were attending to the expectations of both language and dance curricula.

For example, even when we did the movement and using the imagery of the birds to me that’s like teaching them literacy and literacy techniques that authors and poets use and yet by combining the movement that we did with that day, to me they really get it. They get how our authors use this imagery. And seeing them having to think of the story, they know them all – like, they *know* ...when they said the plucking the hatchlings, the owls, the swan, they know all of them. I don’t think they will forget that now - like if someone mentions that in the book I think they will always know what that means because they were like totally *in it and a part of it*, physically. Ya, they now understand what imagery is, what using that type of imagery in writing is all about. To me, I think that they couldn’t have

something that they connect with at that age because they are trying to figure out who they are (Teacher Interview two, 2015).

The students participated in a body storm activity to explore the movement possibilities of the words they had generated through the role on the wall activity. Then groups of students created independent dance work based on the character of Olemaun. The class explored, experimented, and utilized the elements of dance that we had practiced in a previous lesson to generate dance phrases that expressed their thoughts and feelings about Olemaun and her story. The resulting collaborative dance pieces were extremely thoughtful and compelling because they used gesture and expression to creatively demonstrate an emotional connection and awareness of the themes that they were finding in the story. They were focused and immersed in the process of representing the essence of Olemaun's character and her story. They worked collaboratively, solved creative problems and brought the story off the page. They empathized with the character's struggle and bravery in spite of her circumstances. They represented Olemaun as powerful, independent, brave, determined, strong, and resilient. "My favorite sensory experience in the class was the *Fatty Legs* dances. I liked it because we all got to work as a group and we got to express what we thought Olemaun might have thought and her feelings in movement" (Student, Final Sensory Reflection, 2015). Along with the emotional connection students expressed pride in what they had accomplished together. My dance was very effective and really showed the class the emotion of Olemaun" (B.B., Final Student Reflection, 2015). The students, the teacher, and I discussed how remarkable it was that each group had the same assignment and all the dance pieces were completely different and unique. This demonstrated that they were learning to explore the story from their own perspectives and could appreciate others' perspectives and creative choices, too. Each piece represented a unique facet of the character and the story. "I loved it - it was amazing... What a great way to see them experience the story in a different way" (Teacher Interview two, 2015). The students appreciated learning through movement, "Sensory learning is different from how I usually learn because we got taught senses and types of dance but normally we write paragraphs or read" (G.C., Final Student Reflection, 2015).

The teacher expressed that he felt this made a lasting and memorable impression on the students,

“Really it added depth to this novel, beyond, more than I even thought was possible. Then it inspires you, you know. We were talking about the possibility to be able to take it even further - but sometimes we are limited to the things we can do” (Teacher, Interview two, 2015).

Students articulated that the dance work in connection with the story was memorable. “My favorite experience was when we danced expressing Olemaun’s story” (B.B., Student, Final Student Reflection, 2015). The teacher and I discussed the various components that made the dance work engaging and revisited the question of whether it was so effective because students were interested in the subject matter and that allowed them to connect through the arts experiences or if it was the sensory work that really got them into this particular subject. The teacher and I concluded that it was probably a combination of both. The *Role on the Wall* character study and focus on Olemaun, allowed students to tie together the previous learning that they had done and made it engaging for them. Students found different reasons to be engaged in the same assignment. Some were engaged and excited to move and dance and others were more involved because it was connected to telling the story of Olemaun.

I think in some cases they really related with the character and were able to express themselves in meaningful expression. They were engaged and really into what they were doing, I thought again, as a teacher, what a great way to see them experience the story in a different way (Teacher, Interview two, 2015).

4.2.3 Drama: In Olemaun’s Shoes

Students participated in a variety of drama explorations based on the text. This helped them identify resonating themes in their book including identity, and the power of working in role. In the story the residential school is trying to strip Olemaun of her identity. As the students participated in the drama and sensory activities it became more accessible for them to imagine how she may have felt. Through writing in role they had the opportunity to think as the character and imagine how they would feel and react in similar circumstances. Students practiced writing letters home as Olemaun, and then selected words or phrases to exemplify the essence of their letter. The students recited the snippets of the letters as they walked through the room. In the story Olemaun must speak on the radio, knowing that if she says anything negative about the school or her treatment, she would be punished. In this exercise our students

were free to write what they had learned and imagined was Olemaun's truth. They were speaking for her. They got to say what they thought Olemaun might have said if she could. One student wrote,

Mom and Dad, I miss you so much and the school is wicked. Please come and get me. The nuns are cruel and they beat me and punish me. The food is awful and I'm freezing. So please, please, please, come and get me from this wretched school. I love you so much (G.H., Student writing in role, 2015).

Most of the letters echoed a similar spirit. For the drama work the students faced one another in two parallel lines forming a corridor and took turns repeating the snippet that expressed the essence of their letter. One by one the students travelled down the *corridor of voices* so that they could imagine all the thoughts in Olemaun's head as she approached the radio microphone. The sensory and arts work contributed to the students' empathy for the character of Olemaun. "They are more connected to this character and I think it's because of the work that we have done. They have put themselves in her shoes. They've really - we have made the book come to life" (Teacher, Interview two, 2015). Students were able to link their sensory experiences and dance and drama work to their engagement. "I think participating in the sensory experiences effected engagement in school because when we would dance or use our senses it helped us get more interested and engaged in our work" (G.C., Student, Final Sensory Reflection, 2015). The students used their writing in role and other work they had done throughout the unit as a source for the poems they wrote for their culminating task.

4.2.4 Creating the Culminating Task

Integrated units often end with a culminating task. In traditional backward planning the teacher usually knows what the culminating task will be before the unit begins. The exploratory nature of this project dictated that we had no specific culminating task planned because we were discovering the learning along the way and chose to stay open to the possibilities of the process.

As artists and educators, the teacher and I wrestled with different concepts to bring all the learning together in a final collaborative installation. As we discussed different ideas, he

opened the problem-solving task to the students. Because the project was about sensory arts and student engagement it was important that the teacher and I attended to how the students influenced and informed the learning. The students' passion for the project resulted in them advocating to create an installation to commemorate Olemaun, the main character in their novel study, and by extension, to memorialize all the children who suffered and continue to suffer as a result of a residential school experience. The students were curious and fascinated with the significance of the inukshuk and wanted to make one.

I remember the two of us trying to figure how is this going to end. We were looking, of course, in class at Inuit culture and how they live and build communities and of course inukshuks had come up and kids were asking, 'what was the meaning of these inukshuks? - I see them everywhere. What are they and what do they mean?' (Teacher, Interview three, 2015)

The teacher and I agreed that it was important to provide some context regarding installation, cultural appropriation, and postmodern art principles (Gude, 2004). Before the students could begin to conceive the creative work they had to research the history, significance, and appropriateness of creating an inukshuk. The teacher and I also agreed that in order for the students to experience success they needed to feel confident that they had the skills and the ability to carry out the project (see Figure 4.6). The culminating task was an opportunity for the students to engage in creative and critical thinking and to work individually and collaboratively to solve the aesthetic design and practical construction problems associated with the installation (see Figures 4.7 and 4.8).



Figure 4.6 Students Prepare Individual Stones and Poems for Collaborative Installation

Students conducted independent research and participated in creative processes, writing, constructing individual pieces, collaborative creation of installation, and hosting the exhibit. The students demonstrated intrinsic motivation to research, construct, and complete the task.

They were immersed in creative processes and felt passionate about the importance of what they were creating. It was not just about making something nice; it was about standing up and making a statement.



Figure 4.7 Grade Six Students Assemble Installation



Figure 4.8 Detail of Installation in Progress

4.2.4.1 Description of the Installation

The entire classroom was cloaked in panels of white sheets. The cold breeze through the open window caused the panels to sway and ripple. The effect was that the entire room was breathing. Desks were grouped together in the centre of the room. Atop the desks presided the giant inuksuk, comprised of handmade paper-mache stones with poems written on them. The inuksuk, Olemaun's protector and guide stood proud, strong, and reverant. It was surrounded by images that the students had drawn and painted while listening to Dennis Saddleman's *Monster*, an evocative poem that personifies the residential school as a monster. The drawings were placed all around as if they had been scattered on the snow. Tanya Taqac's haunting throat-singing piece, *Rabbit*, used as a reference to Olemaun's fascination with Alice in Wonderland, played on an endless loop adding to the mystery and reverence. Students hosted the exhibit, and acted as docents, answering questions about the meaning of their art installation. This was their response to what they had learned about residential schools and about a part of Canadian 'history' that they wanted others to know. It was very sophisticated and heart-felt. The teacher felt extremely proud of the entire experience (see Figure 4.9).



Figure 4.9 Grade Six Installation

It was powerful because my kids were all a part of it. They all wanted to be a part of it and they were there to explain to the public what this was all about. And just listening to the kids talk about what they had learned and how they felt about the subject and doing real thinking and real opinions about this subject matter, to see the reaction of adults and how they were taken aback by this presentation was amazing. But then to see the kids the next day and how we as a group could make a piece that could start such a conversation amongst all these kids was - I can get emotional right now - but it truly was strong and powerful to see that and to see my kids talking to other children, younger than them and seeing them being able to talk to these kids appropriately about what happened in residential schools. It was really powerful” (Teacher, Interview three, 2015).

A few weeks after the exhibit the teacher and his students received an unexpected honour in connection with the work they had done.

Our installation made it to the cover of the yearbook - that caused a lot of excitement, too. None of us knew. I think that the impact of that installation resonated with a lot of people at the school and so when we got the yearbook we were like WHAT? (laughing). We're on the cover - oh my God the kids went crazy - they were just so happy. It sort of solidified all their work. It made it seem like our community found what we were doing important. So it was really cool (Teacher Interview three, 2015).

As we reflected, the teacher went through the arts experiences,

We did so much we touched on dance, we did visual arts, I don't teach music but we did sound and music, drama, we touched on all those, we did language reading, writing there was oral and listening - so all the language was looked after - we did a little media literacy with them and worked on posters about residential schools that they had learned about so there was so much in it that we integrated and then, of course, social studies - learning about the Inuit culture - not just the novel study but that expanded to learning about the culture and the realization with what is happening with Indigenous People in Canada. So it turned out to be, yes it was *Fatty Legs* the book, but oh my goodness, it was like *Fatty Legs* in 3-D. (Teacher Interview three, 2015)

I showed the teacher a chart (Figure 4.10) of one way to consider the planning, integration, and potential direction for the project and we discussed our approach.

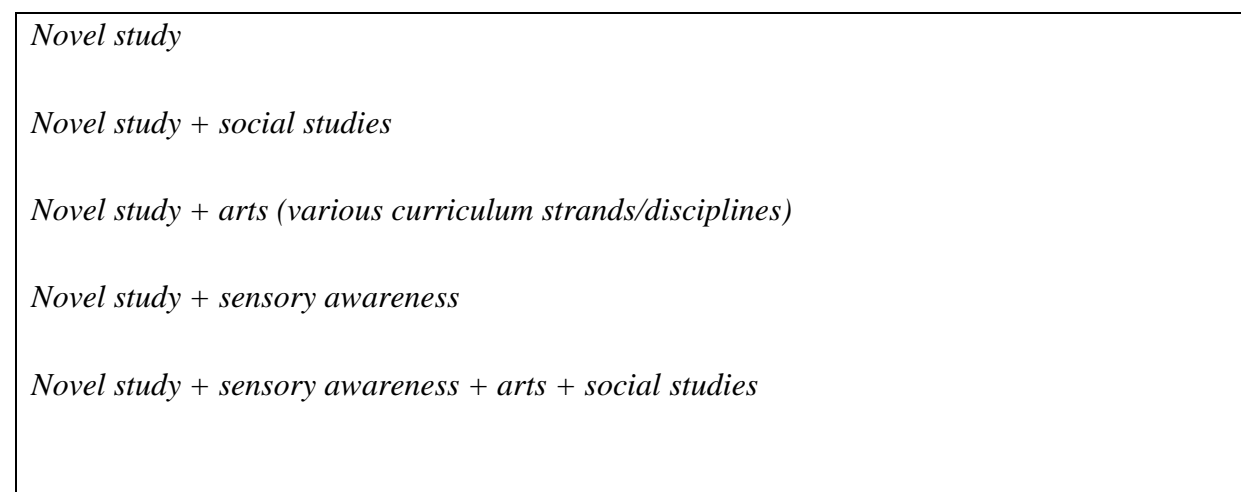


Figure 4.10 Possible Ways to Envision Integrated Planning

He pointed out all the ways we satisfied the most comprehensive level of the plan.

We did a novel study - we added the sensory-based approach to the novel study, which made the novel come to life and a reality. Then we took what we learned from our senses based on the information - we then created pieces of art that were amazing both visually, dance, sound, music process which were outstanding and believe it or not I have these kids so wrapped up in this part of history for social studies that last component of your equation there that I could not have done this with a textbook. How could I have ever gotten these kids so interested in this if it wasn't the use of all of these things like - using the arts as a way to express their feelings, using the arts to express how the character - putting themselves in Olemaun's shoes - I think that's ... we fully accomplished this in a great way - in a great way - they have learned so much (Teacher Interview two, 2015).

The teacher and I discussed how he might use these approaches again in his future programming.

Next year by the time I get to the novel study, *Fatty Legs*, I'm hoping that my kids would already have the vocabulary and some of the experiences. We will have already know what being engaged and being in the flow is. I want them to already have validated each sense although we've discussed this before sometimes the subject matter is what is going to introduce the sense that we are going to look at but then sometimes it could be the other way around" (Teacher Interview three, 2015).

The teacher and I discussed how the senses and the arts programming made the difficult issue of residential schools more accessible to the students,

Honestly, doing those assignments really got them to be in Olemaun's shoes... all just worked out because this was just the best way to really work with all of this...I don't think they will ever forget that book...will never forget what they have learned about residential schools I feel like we can walk away proud this year that we really educated kids about the truth about the history of Canada and we did it through this character Olemaun and using the senses and making this experience real for the kids so that they could connect with this character and really connect with the issue. There is the big umbrella and then there are all the little steps that we took to get at the issue but really it has been Olemaun that has taken us (Teacher, Interview two, 2015).

4.2.5 Sensory Learning In and Beyond the Arts Curriculum

The teacher and I discussed how the senses and the arts are a natural fit. As an arts educator it was always in my plan to integrate the sensory learning with the arts programming for this project. The teacher agreed that sensory learning was a great tool to encourage interest and connection and it helped create authentic integration. We saw the depth of the engagement when the sensory experiences were connected to the language and social studies. The arts processes provided opportunities to explore the work further and in a variety of ways. The arts can be taught without the inclusion of explicit sensory work. Similarly sensory work can be done without the creative and critical processes of the arts. However, based on our own experiences as artists, as teachers and after experiencing this study with the students, the teacher and I both believed that the senses and the arts complemented and contributed to one another in multiple authentic ways. As open-minded arts educators we considered how sensory learning might be useful in other areas of the curriculum as well and asked the students their thoughts on this topic. Their responses are listed in Figure 4.3.

Table 4.3 Students' Ideas about Sensory Learning in the Curriculum

Art	We could bring more senses besides the visual sense (B.B.)
Reading	because we get deeper into the character's story (G.C.)
Science	because you should be able to stand up and move around and feel what you were doing. And, for example, when we are learning about space you should be able to stand up and move like the planets move (G.A.)
French	because it is so boring. All we do is worksheets and word searches. Maybe if it was more fun people would do better at French (G.H.)
French	because we could waste more time and learn better (B.D.)
Math	because sensory learning is moving around more and in math it is fun to use our bodies to think and do work (G.B.)

Math	We could do real life problems to make it interesting (F.G.)
Math	because we will get deeper into the question and it will be easy to figure out the answer (C.B.)
Music	We could express our feelings (F.G)
Gym	because you could get a better feel for the ball which will make you better (C.B.)

4.2.5.1 Student Engagement

For the purpose of this study the term student engagement was defined as encompassing but not limited to emotional connection, motivation, interest and attention, curiosity, understanding, active learning, and perceived importance. It was important to me that the students in the class were fully aware of their role in the project. For my first visit I prepared a power-point presentation to introduce how sensory learning, engagement, and *flow* (Csikszentmihalyi, 1996) were defined in the context of the study. The teacher presented the power-point in a thoughtful and informal way. He used the information and drew upon the students' experiences and interests to make the content accessible and more relevant.

I gathered diagnostic data on the students' learning preferences and their ideas and experiences of flow to use as a starting point for the planning. The students' responses to the diagnostic questions were varied. When asked, "What engages me in school?" the most frequent responses were friends and projects. They wrote that projects allowed them 'to be creative' and 'combine ideas from different subjects'. Students also had a variety of responses when asked, "What do I think learning is?" They wrote that learning was 'cooperating and exploring' 'understanding the world around me', 'there are many ways of learning'. The most frequent response was 'new knowledge' followed by 'experience', 'the future' and 'memory and remembering'. There was a spectrum of responses to the question, "What do I like to learn. Some students focused on subject areas such as math and art. Others mentioned problem

solving and big ideas. One student wrote that she liked to learn things, “where there is one right answer and not more than one” (G.H., Student Diagnostic Response, 2015) which contrasted with another student’s response, “I like to learn about things that I can connect or that impact my thoughts. When I learn about something that fascinates me I want to learn more” (F.G., Student Diagnostic Response, 2015). The final question in the diagnostic was, “How do I like to learn?” Responses to this question revealed that almost half the students identified themselves as kinesthetic learners. “My style of learning is moving. I have so much energy so I need movement to learn. Too much will be on my shoulders if I have to sit in a chair for a long time” (C.B., Student Diagnostic Response, 2015). The remaining responses were fairly evenly spread between visual, audio, independent and group. “I like to learn freely and everyone has their own personal time to learn – and maybe talk to your friends and all learn together and not just be focused on one thing: (G.A., Student Diagnostic Response, 2015). This brief session confirmed the need to provide a variety of approaches and strategies so that all students could have the opportunity to experience their learning in different ways and perhaps discover something new about what engages them in their learning.

The lesson provided crucial information and opportunity for discussion on the concept of *flow* (Csikszentmihalyi, 1990). The power-point was visually appealing and the teacher made it relevant to the students by drawing upon their personal experiences. I considered that the direct learning approach is, ironically, not always the most engaging way to be learn. However, in our third interview the teacher expressed that he thought the introductory lesson was a very important component. It might not have seemed so at first but after the project had finished the teacher observed a marked difference in students’ ability to recognize and articulate their own ideas of engagement and flow.

I noticed that they were conscious of what flow and engagement was whereas before they may have experienced it but they didn’t have the words to say... I think that was another important thing that we saw ... was vocabulary that was used by some as a way to explain what is happening to them whereas before hand they would not know that ... I thought that was amazing to see that they were aware of when they were in that state of mind as well as being able to create that state of mind... so I thought that what we did with that was an incredible tool for them as young people - I didn’t know what that was in grade 6 and to know that that’s my creativity happening and being able to be aware of what’s happening and also to be able to create that environment when they

want to be in that mental state... I think that's amazing that they learned that - as a tool for their life. But also we gotta remember these are only grade 6s they still have jr. high school to go through and to have that, and know that they have that, I think will help them (Teacher, Interview three, 2015).

Students identified when they were in the state of flow. They articulated that they understood how and why they were engaged. The students also seemed more aware and capable of generating a flow state of mind for themselves.

When we had that lesson on flow and engagement, it gives kids vocabulary and makes them aware, right? I had kids, after the fact, during the rest of the year, who every once in a while would mention that they are in the flow. And how many times do you hear a student say that -I'm in the flow right now - but I think teaching them about it gives them the vocabulary and makes them more aware of what is going on with them creatively and emotionally. So, I think those ... I would have to continue to do those lessons (Teacher Interview three, 2015).

4.2.6 Challenges

I invited the teacher to share what he thought were the least significant or successful aspects of the project.

I have a hard time with that because I really feel that everything we did kind of led into the next step, even if we didn't know what the next step was going to be at the time. Whatever previously happened guided us to what that next step should be. So I think everything was valuable. I mean, we did very well. I can't even say that behaviour got in the way (Teacher, Interview three, 2015).

As arts educators, both the teacher and I continually advocate for the merits of high quality arts experiences and methodologies for our schools. One challenge the teacher found with this project, was one that he has encountered before.

A challenge would be that sometimes kids don't realize that what they are doing in the arts is learning and to me that was a little bit of a stressful challenge. I thought, 'oh my God, my kids don't even realize what we're doing with them sometimes. But in a way, it's great - the arts are supposed to be fun. They just don't realize that just because they are not writing things down on a piece of paper, that they are not working. And so that was kind of challenging, not to them, more to me, because I guess in a way I want to be

like an arts activist, ‘you don’t realize how much you are learning right now’, but that’s all right - I saw. I know they are learning and that’s what matters (Teacher Interview two, 2015).

I was interested in the students’ perspectives on the work. The students articulated through their reflections that they appreciated learning through their bodies. It may not always seem like work because participating in the arts can be enjoyable. One student (B.D.) said he enjoyed ‘wasting time’, but also stated that he thought it was important and liked using his ‘body to learn’. His choice of words, ‘wasting time’ perpetuates an attitude that suggests the arts activities deserve less time and energy.

Time was a challenge. Length and frequency of lessons depended on the attention span of the students. In the junior grades lessons could be anywhere from a half hour to a full day intensive. Teachers have more scheduling control in their own classrooms. For this study our encounters had to be fairly intense to satisfy research timelines. I continually checked with the teacher to make sure that the work was aligning with what he needed to do and not taking up too much time.

I thought that some of these activities could have used more time and some of the reflections could have used more time - we just don’t have that time but I felt like, as a teacher, next year when I am planning *Fatty Legs* these activities will probably be happening in a more calm and dispersed fashion - cause I just find you coming in one day and try to get this in and allow for creative process - and as we know, it is not always instant – ‘ok in 5 minutes’ - some kids - I would be like – ‘but I’m just getting started’... (laughing) you know. And so to me, I guess I’m more lenient with time because I understand that sometimes you feel creative and sometimes you don’t and sometimes you need a little more time (Teacher, Interview two, 2015).

4.2.7 Post Research Events

The class had planned a field trip to a residential school in Brantford but it had to be cancelled so the First Nations, Metis, and Inuit representatives from the residential school came to visit them at their school to facilitate different workshops. The representatives were very impressed at the insights and sophisticated questions that the students posed. They remarked at the high level of engagement and interest the students demonstrated in the topic of residential schools.

I am proud to say and you'll be proud to know that when these people came to talk to us it was our kids that we worked with that were fascinated by their family history. They were the first to ask about their experiences with residential schools they were fascinated to know more about the survivors (Teacher, Interview three, 2015).

The visitors told the teacher that many students do not know about residential schools and the lives of the children that it impacted and still impact to this day. The students' responses demonstrated to them that the issue had been taught with care and sensitivity.

A second example was the students' zeal and intense interest in the Great Canadian Mail Race. The premise of the initiative is that each student writes a letter to an unknown student in the same grade in any school throughout Canada. The teacher includes a cover letter with each student letter explaining the assignment and hopefully the class receiving the letter will respond and write letters to other schools in Canada. The students were thrilled to get the opportunity to write for an authentic purpose and they were so immersed in the project that there was no question in their minds what they needed to do.

I said, "Okay there's this mail race we can write to a student anywhere in Canada". Well, when I said that, first thing, "That's it, were finding schools in Nunavut. Let's go". I said, 'it doesn't have to be Nunavut - you can write anywhere'. But they just wanted to find out about the lives of these kids who were still living in Nunavut (Teacher, Interview Three, 2015).

They mailed twenty-two letters to different schools. Some came back marked 'return to sender'. Other letters may have made it to their destinations but did not get past the office or landed in a class that was too busy to manage the time necessary to respond. In other cases it may simply have been too close to the end of the year. As we discussed this during our final interview, the teacher began to beam with pride and was very excited to share the news.

We got one response from an Inuit boy out there.... He responded to one of our boys. So this was an amazing. Anyway - it wasn't like it was B.D's day - that he got a letter - It was *our* day - like we were *all* so excited about that response. The young boy sent us pictures of him standing with an inukshuk out there, and pictures of wildlife that he sees everyday, and my kids were floored. They could not believe that they actually made contact with an Inuit child in Nunavut whose family may have partaken in that sad history that happened. I saw a *strong* connection. I mean it was not like, 'Oh ya, we got a letter' It was *such* excitement that this kid sent them a letter (Teacher, Interview three, 2015).

Students demonstrated motivation, passion, keen interest in the character, the story, the culture, the history, and the contemporary issues related to the book. Specifically, they exhibited a high degree of passion and concern for the issue when the *Truth and Reconciliation Report* was released in June.

That report came out and we talked about it. My kids came in the next day talking about it - the kids are forever connected to the First Nations and Inuit people. We had to watch it. We watched it on the smart board together they were just - I said, 'can you believe that we, now in 2015, have finally realized that this is part of our Canadian history - that this really did happen. Today. It is truth now. It is marked in history'. And they were just so absorbed with those reports. What were those reports all about? They had to go research it ... those moments give me goose bumps - (laughing). It's nothing like 'well what's the population of Nunavut' or anything like that gives me goose bumps. It's when they see it in their everyday life. So when they do see things on the news about the Truth and Reconciliation reports my kids know what they are talking about, you know, and that makes me very proud. I feel like I had a really good year. It is one of the best years I have had so far teaching (Teacher, Interview three, 2015).

Students articulated how they felt the sensory and arts learning contributed to their engagement in school. They identified ability to focus, "I think participating in the experiences affected my engagement in school by helping me become more focused and looking more at the senses and seeing who the characters are when I'm reading a book or looking at an article" (G.B., Final Student Reflection, 2015), connection, "I think I'm better engaged because it's a fun way to learn and be creative at the same time you're learning schoolwork in a creative way it made me connect more as a student to learn" (G.D., Final Student Reflection, 2015) and, "It's different because it's a fun creative way to learn but on a normal school day you would sit down and learn the lesson and write down our answers - like this we could express ourselves" (G.D., Final Student Reflection, 2015). Students expressed that working through the senses helped them to, "concentrate and it makes it easier to express my feelings on paper" (E.G., Final Student Reflection, 2015) and helped their academic skills in a positive way, "I think it is a way a deeper way of looking at things and making you think about it" (C.B., Final Student Reflection, 2015). The teacher expressed, "We really, I think, got our direction from the kids and their interest and where their interest was with what was going on with Inuit people and residential schools as well" (Teacher, Interview three, 2015).

Students demonstrated high levels of engagement throughout the process. “Not one time did I hear kids say, ‘I don’t want to be learning about this. This is boring’ I never heard anybody say, ‘do we have to learn this? Residential schools, who cares’ - I never heard that” (Teacher, Interview three, 2015). As was expected, students demonstrated preferences for what they liked to learn and how they liked to learn. The variety of learning experiences and the approaches piqued their interests. “I think participating in the sensory experiences affected my engagement school because it made the work more interesting” (G.H., Student, Final Sensory Reflection, 2015). This helped to engage students in subjects that were not typically their favourites and they identified sensory learning as a way to adapt to less engaging activities. Sensory learning “might help me flow when I am doing something I don’t like” (B.A., Student, Final Sensory Reflection, 2015). The students expressed their appreciation for how their bodies and senses could be actively engaged. “Sensory learning is different because we used our body to learn” (B.D., Final Sensory Reflection, 2105).

The teacher continued to use sensory learning and reported that students were receptive to finding new ways to connect with other texts after the novel study was complete.

We were looking at Banksy, who I think is a social justice commentator on different social justice themes. So I used him and his art as a pathway to show the kids how artists still create and react to social justice issues that are going on in the world today. So then I had them focus on the senses really focus on the sounds - so lets say the kids were reading a story about a young girl and her experience in the wars in Kosovo so they considered what were the sounds they might be hearing - this is while they were trying to develop a symbol for their art - so what are some of the visuals that are going on in the story or that could be going on during a time like that. If you were that child what would you be seeing, hearing, tasting - looking at all the different senses that would be going on during the book (Teacher, Interview three, 2015).

The teacher was very pleased with the direction of the work and attested to the depth of the student engagement, the power of sensory-based arts learning, and the success of the project. He was convinced that the students demonstrated a variety of alternative understandings following the work we did together in the class. Students demonstrated keen interest and more ease when writing descriptive narratives following the project.

When we were writing our stories I found that relating and connecting to the senses helped them in their writing and just being able to write details - and I would always bring back - remember how Margaret wrote in her book, *Fatty Legs*, and the senses and I think that helped kids bring detail writing into their stories. For example, creating our success criteria for narrative writing, we really used the senses especially when they were trying to describe the setting or the character. So I felt that the work that they had done before really helped them to use detail and describe in more detail in their stories (Teacher, Interview three, 2015).

4.3 Conclusion

The data suggest that working with the senses contributed to the students' emotional connection to the material. Sensory work brought students into the 'now' which enhanced their engagement and flow. The depth of their engagement, the skills they demonstrated through the processes and results of their artistic explorations, and their reflective responses provided evidence of their new learning. The students proved again and again that they were motivated, energized and challenged by the work. "You concentrate more than usual and put more effort into your work (E.G., Final Student Reflection, 2015). The sensory work continued to contribute to their academic and creative skills in reading and writing, in social studies, and in various arts disciplines long after the project was finished.

Analysis of data gathered through observation, interview, and student work samples and reflections revealed the emergence of major themes. These themes include authentic connection, integration, awareness through working in role, creative freedom and autonomy, attention and focus, and intrinsic motivation. As stated the various sensory learning experiences and the integrated arts learning intersect, overlap, and the study addresses how these experiences contribute to student engagement. The research problems (sensory learning, arts programming, and student engagement) that originated from the research questions also overlap. Table 4.4 illustrates how the emerging themes relate to the three research problems.

Table 4.4 Emerging Themes Related to Research Problems

Sensory Learning	Arts Programming	Student Engagement
Authentic connection to self and experience	Authentic connection to material and curriculum	Authentic connection to active learning
Integration (of multiple senses)	Integration (disciplines and content)	Integration (based on student interest)
Awareness through working in role (awareness connected to others)	Awareness through working in role (explore and express in role)	Awareness through working in role (increased investment in experience)
Creative Freedom to explore individual sense awareness	Creative Freedom (to explore and express creatively)	Creative Freedom and Autonomy (choice)
Attention and Focus (to sensory awareness)	Attention and Focus (to multi-disciplinary material)	Attention and focus (to the learning experiences)
Intrinsic Motivation (emerging from interior experience to outer expression)	Intrinsic Motivation (enjoyment and challenge of arts processes)	Intrinsic Motivation (inspired and immersed in the experience)

In the next chapter these themes, based on the findings, are interpreted and discussed in relation to the literature and the affordances and implications of this research are examined.

Chapter 5

5 Discussion

The purpose of this case study was to examine how sensory-based arts pedagogies might be structured to provide opportunities for junior students to learn and make meaning in multiple ways. The study further sought to examine how the sensory-based arts pedagogies created potential for student engagement. The study took place in a grade six classroom in an economically and culturally diverse urban neighbourhood in Ontario over a period of three months. I worked collaboratively with the teacher to plan and facilitate integrated sensory arts programming. I visited the classroom ten times and conducted three interviews with the teacher. The teacher's perspectives and insights were a valuable component of the research. Each of the 22 students in the class participated fully in the lessons. Data from twelve students who had parental permission are included in the study. The data included interviews, observations and student work samples. I analyzed and interpreted the data to extrapolate the multiple facets of the work and attended to the ways that the teacher and students participated, articulated, and shared their experiences through the collaborative sensory-based arts integrated learning. Students engaged in explicit learning of the visual, auditory, tactile, olfactory, taste, kinesthetic, vestibular, interoceptive, and proprioceptive senses. They had opportunities to translate experiences through their senses and develop discipline specific skills and techniques to explore and express their ideas, thoughts, and feelings. Students worked in creative ways through a variety of arts and language explorations inspired by the book, *Fatty Legs*, written by Christy Jordan-Fenton and Margaret Pokiak-Fenton. The programming for this project followed a version of the principles for creating artful instruction modeled after Aristotle and Dewey (Parrish, 2008):

- 1) The learning experiences had a beginning, middle and end, and the project continued over an appropriate period of time to sustain engagement.
- 2) The students were the protagonists of their own learning. They had choice and were immersed in the process by connecting their senses and identity to the material.
- 3) The learning was active and challenging.

4) The context was meaningful. The sensory arts approach created the opportunity for the students to be immersed in the experience and connect to the larger issues in multiple ways.

Throughout the study I followed the main research questions: What opportunities for learning and engagement do sensory-based arts pedagogies provide for junior students? How might sensory-based arts pedagogies be best structured and positioned to provide relevant and meaningful learning opportunities to junior students? How might experiences that focus on sensory, mind-body awareness, and the imagination contribute to students' learning, engagement, and meaning making? Three main research foci arose from the questions that guided the study. These were sensory learning, arts programming opportunities, and student engagement.

I present the discussion according to the major themes, refer to the literature and then relate the findings back to the three main research problems that stemmed from the questions. The approach, the curricular content, the sensory explorations, and the arts implementations inexorably integrate, connect, overlap, and intersect across the three research problems. For each theme the contributing events and interpreted data analysis are summarized and I refer to the parallels, intersections, and the extent to which the study resonates, confirms, or extends the literature from related fields outlined in chapter two.

5.1 Discussion of Major Themes

The major themes that emerged from across the observations, interviews, and student work samples were authentic connection, integration, awareness through working in role, creative freedom and autonomy, attention and focus, and intrinsic motivation. Table 5.1 illustrates some of the ways that the themes relate to the research problems. The themes are discussed in relation to the three research problems and the literature.

During our first lesson the students were very keen to learn about the ideas associated with flow (Csikszentmihalyi, 1990). Some of the students shared that they had experienced something like flow but did not know how to articulate it, or that others experienced it, too. They expressed excitement to learn that it was something that they could create for themselves.

Connecting students to the idea of flow made them aware of sensory learning as a skill that they might use as a way to adapt to less engaging activities “Sensory learning might help me flow when I am doing something I don’t like” (G.A., Final Student Reflection, 2015).

Following the unit the teacher reported the students’ ability to recognize when they were in the state of flow and how he was impressed by their ability to articulate their responses to their experiences.

Table 5.1 Major Themes Related to the Research Problems

Theme <i>Problem</i>	Authentic Connection	Integration	Awareness through Working in Role	Creative Freedom and Autonomy	Intrinsic Motivation	Attention and Focus
<i>Sensory Learning</i>	To self and experience	Of multiple senses	Awareness of self and connection to others	To explore individual sensory awareness	From inner exploration to outer expression	To sensory awareness
<i>Arts Programming</i>	To material and curriculum	Of disciplines and content	Explored and expressed in role	To explore and express creatively	Enjoyment and challenge of arts processes	To multi-disciplinary material
<i>Student Engagement</i>	To active and expressive learning	Based on student interest	Increased investment in experience	Freedom of choice	Inspired and immersed in the experience	To the learning experiences

5.1.1 Authentic Connection

Through the research questions I sought to find the effectiveness of sensory learning opportunities in the junior classroom. One of the major themes that emerged from the data gathered through observation, interview, and student samples was authenticity. The data suggest that students made authentic connections to the curricular content because their senses were immersed in the experiences. Sensory events seemed to increase the students' connection to the material because of their active involvement with the real objects. This, combined with close reading activities and supportive discussions, contributed to the students' ability to engage with the materials in new and divergent ways (MacRae, 2007) and encouraged freedom and confidence for them to create their own work (Pavlou, 2013). Sensory learning was made explicit and students were encouraged to attend to their awareness of a variety of sensations in connection with *Fatty Legs* and their artwork. As a result students made deeper connections to the material. They did not rely only on what they saw or heard or read to elicit creative responses, they engaged with sources in more aesthetic, visceral, and divergent ways (Uhrmacher, 2009) because merely looking does not automatically stimulate imaginative responses in students (Pavlou, 2013).

Returning to the research question regarding programming opportunities and arts pedagogies, the sensory learning was supported by arts instruction, guidance through creative and critical processes and inquiry to create opportunities for students to be deeply engaged with the work (Greene, 1995). This integration was designed to help students build personal and individual connections to the character, the story, the culture, and the broader issues. When the students were drawing, speaking, and listening during the partner re-tell drawing they were demonstrating the connection between their interior ideas and their exterior actions. They were thinking simultaneously with their "hands, sensibilities, and brains" (Vecchi, 2004, p.138, as cited in MacRae, 2007).

Engagement in the sensory and arts processes connected the students to the character and the story and helped make the character in the book relevant. Throughout the three months the students continued sensory explorations of the story. As their investment into the story

deepened they formed passionate ideas and opinions and developed an insatiable curiosity for the issues. Dewey (1902) suggests that students will be more engaged with the work if it is relevant to their lives. The students were interested in the topic and the material was meaningful. The sensory arts experiences related to the novel study encouraged creativity. The data suggests that the integration of the sensory arts activities and the content of the work created conditions for the students to become more aware of the skills necessary to deal with the complexities of humanity (Cutcher, 2013). This was exemplified when the Truth and Reconciliation Report was released in June 2015 almost three months after the unit was complete. They remembered. They cared. Even though the students had moved on to a new unit of learning, they demonstrated a high level of interest and determination to learn all they could about the report.

5.1.2 Integration

Integration occurred on many levels during the study and involved exploring the meaningful interactions between the senses, arts disciplines, and subjects. Relating specifically to the research question about arts programming, the teacher and I created opportunities for students to become immersed in their learning by carefully integrating arts pedagogies and sensory explorations with a compelling topic that had several curricular possibilities. Following the idea of flexible purposing (Dewey, 1938) the plans of the project were structured but open. When the teacher and I found opportunities that would benefit the students and the study, we were positioned to respond to them and program accordingly. Had we been rigid with a fixed plan that disallowed deviance or divergence the results may have been different.

Students participated in integrated experiences across the disciplines of drama, dance, visual arts and music. Reading and several forms of writing were a necessary component of the work. The sensory, arts, and language explorations were integrated with the Social Studies curriculum. The Arts provided opportunities for students to explore and refine their sensibilities and to contribute to the development of their awareness for interacting with the world. Through the arts practices students were provided opportunities to think, feel, explore, and express in multiple ways. Students made their learning visible as they explored ideas, thoughts, and feelings using sensory awareness and imagination (Eisner, 1993). They discovered new ways

to develop their own work, perceive work created by others, communicate, and share common and diverse ideas. Students were encouraged to reflect and share daily as a way to consolidate and articulate their learning. The more they practiced reflection the easier it became part of their process (Greene, 1995). They demonstrated this throughout the study by becoming increasingly articulate and eager to share their ideas. Data from students' reflections and the teacher's testimonies confirmed my observations that the students' experiences were meaningful and memorable (Gamwell, 2005). The unit of study concluded with a compelling culminating task. The teacher was very impressed with the insight and sophistication that the students demonstrated. The students were extremely proud of their work and eager to share not only what they had learned, but also how they had learned, with the larger school community.

To program effective integration, the premise is that the expectations of all the subjects being integrated are addressed in a balanced way (Ministry of Education, 2009). Integration allows teachers to address several expectations through fewer projects. Meaningful integration creates opportunities for students to experience their learning in broader and deeper ways and affords connections that the singular subject could not achieve on their own (Eisner, 2002). In this case study the teacher and I remained flexible and observed carefully so that we could plan the lessons based on what compelled the students (Dewey, 1938). In this study our processes were transparent. The teacher and I communicated to the students that their insights and opinions were instrumental in shaping the sensory arts experiences for the project. The students had a voice and a choice in their education experience. Their interest in the topic created the opportunity for the programming to go deeper. Our choice to base the sensory arts integration on the story that the students were interested in created the conditions for them to have an immersive experience that they would not have had by reading the book alone.

More specifically with regard to integrating dance and language, the literature suggests that there are links between students' creative processes and critical thinking and that students engage in similar thinking, reasoning, and problem solving processes in dance and language (Giguere, 2006). As dance can be used as a metacognitive tool, Giguere (2006) advocates for dance to play a more prominent role in elementary education. In this study students had

opportunities to connect deeply to the material through movement explorations in which they explored the emotional and sensory world of the character.

5.1.3 Awareness through Role-Play

In educational drama, role-play is used as a strategy to explore the inner world of character. Working in role helps teach students how to identify with others and gives them an opportunity to safely put themselves in someone else's shoes to imagine how they might feel. The purpose is to help students learn through and consider alternate perspectives. The Ontario Arts Curriculum suggests that when students live through "the experiences of others in imagined situations, they learn to understand a variety of points of view and motives to empathize with others" (Ministry of Education, 2009, p 16). In the unit, students were introduced to the larger issue of residential schools through a character with whom they, through their book and the arts and sensory work, could identify. Students demonstrated a capacity for empathy beginning with their interest and concern for the circumstances of the main character of the story. It began with Olemaun and then extended to the broader story, the history, and to the contemporary human rights and social justice issues related to their study. Students were given opportunities to make personal connections to the human stories that exist behind the general and faceless headlines and statistics that they researched as part of their social studies unit. The sensory and arts explorations helped connect the students to the character and brought more awareness to the significance of real people and real issues.

Students began the arts explorations by generating words and phrases based on the characteristics of the main character through *Role on the Wall* and used the words to inform and inspire their dance work. Through *Writing in Role*, students demonstrated a high degree of empathy for the main character. They took the work seriously and wrote insightful and heart-felt letters to articulate their understanding, compassion, and rage (Booth, 2001; Swartz, 2002). Other factors that contributed to the positive results of this study were that students were deeply connected to the main character because through the arts and sensory experiences, they imagined, saw, heard, drew, danced, smelled, tasted, moved, wrote, spoke, constructed, and presented through her. They understood that Olemaun was not just a character in a story. She was/is a real person who experienced a part of Canadian history only now beginning to be

properly acknowledged. They also demonstrated through their keen interest in the current events that they realized that even though the story was about a specific culture at a different time, its impact causes it to be a significant contemporary social and political issue. How could it not be relevant to their lives? The students were deeply moved and compelled to learn all they could.

5.1.4 Creative Freedom and Autonomy

The arts programming plans were created with freedom of exploration and creativity in mind. The students frequently expressed through their reflections that they enjoyed the freedom to explore creativity and express their learning in multiple ways. Freedom of creative expression and autonomy were significant features of the work we did together. The teacher, the students, and I recognized that an important component of the sensory arts work was that it was individual. Students appreciated the opportunity to express their ideas, thoughts, and feelings about their learning within the structure we created. Even though the events were planned and programmed, the sensory experiences and expectations were not prescribed. Personal choice and voice were encouraged. This contributed to the students' engagement because their choices drew upon their individual sensory and emotional intelligences. They explored and shared. We established a non-judgmental environment so the students could feel confident that their opinions were valued (Amann, 2003, Eisner 2004, Gamwell, 2005; Pavlou, 2013) which contributed to an overall positive learning community.

Furthermore, the study revealed that along with creative freedom, students preferred the invitational approach and did not like to be told what to do or how to do something. The teacher and I planned the sensory-based arts unit and provided a structure within which students could explore and discover. Our approach to this learning was invitational and the students responded favourably to having the opportunity to learn in new ways. Rather than telling the students to do the work we structured the work so that they wanted to do it. We supported their processes and provided context as well as tools and techniques for them to use if and when they chose (Greene, 1995). Examples of this were during their soundscapes, their dance work and in the realization of their culminating task (Amann, 2003; Eisner, 2004). Students expressed their appreciation for being able to learn and express in new ways so that

they were not confined by their ability to articulate their understanding in written answers to questions about what they knew (Eisner, 2004; Polanyi, 1966). They also articulated their appreciation that their ideas and choices of how they liked to learn and express their understanding were valued. We promoted the idea that there was no fear of failing so that they could feel liberated to explore and experiment without worrying about results or judgments (Csikszentmihalyi, 1990).

5.1.5 Intrinsic Motivation

The sensory arts work contributed to students' learning, engagement, and meaning making. On a number of occasions, particularly during the soundscape, dance, and culminating tasks outlined in Chapter Four, the students demonstrated immersion in their process. They were motivated, challenged, and experienced intrinsic satisfaction. We observed this motivation as students wanted to continue working on their projects through recess and afterschool and as we heard them talking about the ideas at their lockers. The activities were autotelic (Csikszentmihalyi, 1990). The students were engaged for the joy of the work, not for marks. Referring specifically to the literature, this study replies to Eisner's (2004) contention that school should provide opportunities for students to experience intrinsic satisfaction and an end to educational policies that encourage children to seek extrinsic rewards and become point collectors. Students in this study made relevant connections between what they were experiencing and the concepts they were studying. Students enjoyed the quality of the process of their experience as well as the end product and result of their work (Eisner 2002). The work was its own reward. The teacher reported that the interest in the work continued after the project was finished. The rewards were intrinsic because the desire to do the work continued with no provocation. (Csikszentmihalyi, 1990; Eisner, 2002; Marzano & Pickering, 2011). During my first few visits I noticed a few students talking about marks during the creative process and how they thought they were being graded for every moment. I assured them that teachers do not necessarily mark the creative process but that the process is an essential part of the learning. Teachers observe, assist, and assess, and students assess themselves according to co-created success criteria. When I work with teacher and students, I reinforce the intrinsic value of the learning. My focus is not on marks (though I share methods of generating marks

through assessment practices). It is the quality of the experience that contributes to real learning and real engagement (Eisner, 2002; Csikzentmihalyi, 1990). The students applied great efforts because they were motivated and their purpose was clear. They did not struggle with wanting to do the work or finding a reason to do the work. Their efforts demonstrated that they wanted to do the best job that they could and that they enjoyed gaining skills and experience in the process of doing the work, not for the marks but because it meant something to them.

It may be useful to briefly consider the difference between the types of work we did in the study with other work that the teacher said was less appealing to the students. In addition to the standardized tests that students must do every three years in Ontario, they must also participate in reading tests every year, twice a year. In this test, they read a story and have to answer a standardized set of questions. There is no learning or active involvement with the material. It is a measurement to determine how well the student understands the story by how well they write their answer. Such tests negate the breadth and depth of the possibilities of how students can interact with stories to learn and express their understanding. Such measurements promote a narrow view of student success. Standardized testing inhibits the range of the curriculum and the learning possibilities for all students (Dewey, 1902; Cutcher, 2013; Eisner, 2002, 2004; Marzano & Pickering, 2011). When students are empowered through interest, choice, and immersion in the material they are creatively challenged and invested in their learning. When students are given the freedom to experience their learning creatively they tend to enjoy learning, stay in school, become lifelong learners, become more self confident, and demonstrate more pro-social behaviour (Cutcher, 2013). The teacher reported that this year was his best year in terms of meaningful learning and it just happened to be on a year that union job action prevented standardized testing or report card comments.

5.1.6 Attention and Focus

Attention and focus, a category of the definition of engagement (Marzano & Pickering, 2011) used throughout the study was another major theme that emerged from the data. It was a specific category of observation, a concept that the students wrote about in their reflections, and something that the teacher was pleased to witness increasingly throughout the study. The

students demonstrated interest and eagerness to learn throughout their creative and critical processes. During our post class discussions the teacher and I agreed that the actual sensorial experiences were powerful and very successfully immersed the students in the learning. We also discovered that we did not have to go through the entire explicit process each time. Once the particular sensory exploration had been experienced in the class we merely had to recall it to elicit similar responses (Gamwell, 2005; Giguere, 2006). The teacher recognized this later in the year when the students were engaged in narrative writing. The experiences became part of their sense memory and they could draw upon them to continue to work in multiple ways to uncover, explore, and understand personal, cultural, and political themes from their book. The sensory events, the arts disciplines, the book, and the related social studies issues resulted in a compelling integrated unit that provided a wealth of opportunities for students to become passionately involved with the character, the story, the culture, the history, and the contemporary social issues. The structure of the unit allowed the students to be flexible in their choices. Explicit focusing exercises, including movement and breathing techniques, and listening activities, helped the students access different kinds of awareness and allowed them to be more involved in their learning. The activities and learning opportunities were creative, enjoyable, and challenging, which kept them involved (Csikzentmihalyi, 1990) and contributed to their attention and effort. Students gave their attention to the material being presented because it was worth their attention (Sullivan, 2000) and they were explicitly shown ways that they could interact and engage with the ideas creatively so that they could make the material relevant for themselves. When the material was relevant, the students focused.

Students also demonstrated that their attention and focus contributed to their academic efforts. The teacher reported an increase in the students' efforts and abilities in the quality of their research and their expository and narrative writing skills. Because this study was focused on finding programming opportunities and evidence of student engagement, increase in academic effort was not a look for on my observation template. I was not looking to compare how the students performed academically prior to the project and following the project. That the arts support learning in other curriculum areas is not a surprise. In fact, the arts' positive contribution to academics opens up an entirely separate discussion that this study is not positioned to adequately address. The complexities associated with the issue that the arts are useful to raise mathematic and verbal skills (Eisner, 1998; Hetland & Winner, 2004) are worth

pursuing in another study. My focus advocates for the merits of the arts disciplines and for preserving them as valuable subjects and methodologies in their own right, and that they not be relegated to support curriculum that may be considered more important (Eisner, 2002). In fact this research advocates for an increase in explicit arts education and meaningful integration so that students have opportunities to explore, learn, and express in multiple ways. Of course, I was also pleased that the students' writing and researching skills improved as a result of the project. The teacher reported that following the project, the students responded favourably and easily to research and writing tasks and, especially in their narratives, he noticed they were writing with a much greater ability to describe the essence of the setting, character, and experience. I also observed focus, attention, enjoyment, commitment, and total immersion throughout the learning and as the students prepared for the culminating task.

5.1.7 Conclusion of the Major Themes

Returning once again to the research questions, the themes described above indicate that there are several rich possibilities for learning and engagement through sensory-based arts pedagogies for junior students. This study found that both explicit sensory explorations and integrated arts programming encouraged rich and engaging learning but the integrated work in connection with the rich source provided the most in-depth and meaningful work for the students. Just as the explicit learning about the elements of the different disciplines were useful as an introduction, the sensory learning was useful to prime and activate the students. The art of the programming arose from the balance between the preparation lessons and the in-depth integration of the rich source material. For this case study the explicit instruction followed by exploratory integration was the most effective way to structure and position the sensory-based arts pedagogies to provide relevant and meaningful learning opportunities to the junior students. As described above, these sensory arts experiences contributed to students' learning and engagement most notably in the areas of attention and focus and intrinsic motivation.

5.2 Affordances and Transferability of the Study

This small-scale case study does not make broad claims about the generalizability of the findings and may not necessarily reflect those of a similar study in another setting due to a

number of particular conditions including my role as researcher and arts advocate, the small sample of singular location, teacher and class, the particularity of content, the senses and arts disciplines explored, and my presence and role in the classroom. Also worth consideration are the differences in approach to how the students usually work, the data gathering methods, and my interpretation and analysis.

As a qualitative study this research explores the quality of the learning experiences in one specific context. The small sample and singular location allowed for deeper focus and more variable control than if the research were to have occurred with a larger population or in multiple sites. I recognize that aspects of the study might not be appealing for teachers who are uncomfortable with uncertainty and not knowing where the learning will lead. It does not claim that all students in the class were more engaged in their learning at all times, or that the approaches described in the project would be successful in every classroom. It does not claim or recommend that sensory-based learning should be done all the time or that it is the best approach for all learners. It does however offer rich description about the ways that the approaches were successful for this case.

My positioning in the research as both a researcher and practitioner meant that I was part of the world that I was studying (Cohen, Manion & Morrison, 2011). Because my position in the research was not neutral, I endeavored to include a breadth of examples, voices and perspectives as I gathered, analyzed, and reported the data. As an arts educator I advocate for the importance of quality arts education. My background, interest, and experience in arts education directed me toward this particular research and my goal was to find and share evidence that sensory-based pedagogies do provide opportunities for students to learn and make meaning in multiple ways. As a reflexive practitioner I engaged in self-reflexivity and kept journal notes throughout the research process, which along with the observation notes, transcripts, teacher interviews, and student work samples and reflections, contributed to the thick description. I recognize how my role shifted between researcher, collaborator, observer, guest, colleague, and teacher. I intentionally practiced awareness of the shift in dynamic with the students and the teacher as I moved through the various roles. Taking on the multiple roles was not in my initial plan, but made sense once I was in the field. It was not practical to plan and discuss the nuances of every lesson with the teacher so it was prudent for me to plan and

deliver particular lessons. These sessions were recorded via my laptop so I could view them later to make observation notes. I perceived the shift between my role as researcher and facilitator created a more fluid dynamic in the classroom. It allowed me the opportunity to interact with the students and gave the teacher an opportunity to observe and share his perspectives following the lesson. I deliberately chose a teacher that shared my passion for arts education and social issues. Through interviews and informal conversations, the teacher's voice is featured prominently in the study. The students were made aware that we were all embarking on this journey of discovery together and that their opinions, perspectives, and insights were integral to the process. The students' contribution through their reflections and work samples provided invaluable perspectives on the project. They also recognized that the teacher and I were flexible and had a very collaborative relationship, which we continually modeled in the classroom. As a result, the students responded favourably to our positive and collegial approach and they demonstrated that they enjoyed participating in the process. Of course, as the researcher, I was positioned to create, select, and interpret every aspect of the planning, implementing, analyzing and reporting of the project. My participation and processes in the research are clearly communicated throughout.

When planning the project I considered that my presence and my position as an outsider to the classroom environment might influence how students responded. My immersion in the class was as a facilitator and observer and the project was sustained over the three months so my attendance in the class was considered fairly common or regular after the first few visits. The students were accustomed to having guests so the Hawthorne effect (Cohen, et al., 2011) did not seem to be an issue that needed to be addressed. The teacher and I discussed how my presence might impact students' behaviour or performance and he reported that from his perspective the students' responses were consistent whether I was there or not. He assured me that once the initiative was set in motion, the students were receptive and proceeded with interest. This was confirmed by the fact that the teacher conducted some of the lessons when I was not there and reported consistent results. That he used the strategies between my visits had another benefit in that it helped to make the project more seamless and authentic. Students did not have to wait for my next visit to continue the sensory arts work. The lessons delivered in my absence were either lessons that the teacher and I planned together, or that the teacher adapted to his program by including explicit sensory connections. In some cases the learning

experiences were not planned at all. The teacher reported that the students made spontaneous connections to the sensory approaches and content of the work and when this occurred he followed their lead. This indicated to me that the strategies were effective and engaging. I also considered that the way the students worked in the classroom during the study might be different to how they usually work. My work with the class began approximately half way through the year. One of the joys and challenges of starting an alternative approach and working in a classroom for a limited time is that it can bring fresh excitement to the class.

I consider that several variables led to the success of the project. The teacher and I are specialists in arts education. We were open and receptive to programming possibilities. We collaborated well. There were two of us, so while he continued to manage the daily routine of his class I was able to develop materials. We devoted three months to the classwork. The source we based the integration upon was rich and had powerful learning potential. The class size was small and the sample size was twelve. From my perspective the students were willing participants. The teacher and I discussed the serendipitous and spontaneous nature of the work but we also acknowledged that the success was also rooted in experience and solid foundational pedagogical structure. It is worth considering that changing any of the variables would impact the dynamic of the project and potentially alter the result.

The specificity of the source used to create the integrated learning was a factor in the study. Once the fieldwork was underway the teacher and I recognized the potential to base the focus of the work on the story, *Fatty Legs*, as the inspiration for the learning. My initial concern that being too specific would limit the usefulness of the study was easily shed when I observed the intensity of the students' sensory learning in relation to the book. I knew that the study, the teacher, and especially the students would benefit from deep focused work on this rich source and I felt confident that other teachers and researchers could adapt the strategies and approaches to their own choice of authentic source for their students. As with the small sample and single location, the particularity of the source allowed for deeper investigation for both the study and for the students. It is worth considering how the results might be different if the study had been conducted using a different source.

It is also worth investigating if the sensory arts approaches were in themselves effective because they seemed new and different. Could the approaches and positive effects be sustained throughout a whole year? Should they? The teacher and I discussed the intensity of the integration and his plan to incorporate the sensory arts approaches earlier in the year and throughout the entire year as appropriate for curriculum and student needs.

I developed the data gathering and analysis methods according to the needs of the study's design. I considered alternative theories and methodologies but was always more interested in qualitative research. Different approaches would likely have yielded different understandings. For example, a survey that asked the teacher and students about their opinions or observations on this research topic would have yielded different data and would not have provided the quality of experience data that the case study afforded. If the specific curriculum and approach had been known in advance of the planning, I might have developed alternative data gathering instruments. For example, had I known the focus was to be on *Fatty Legs*, I might have created more specific instruments, such as a comparison chart, to trace the ways this approach was different from the previous years the teacher taught the book. The choices related to each phase of the study including the setting, participants, materials, instruments, methods and the specificity of the sensory arts programming, and the choices made in collecting, analyzing, and reporting results were all subject to my interpretation. Through this research I endeavored to explore counter arguments, attempted to find disconfirming evidence, and presented as descriptive and multi-faceted an account as was reasonable and possible. Chapter Four details the triangulation and confirmation of the results.

In terms of transferability, the study offers a glimpse into different ways that the integrated sensory arts approaches were successful in this particular setting, with this teacher, students, and the rich source used as inspiration for programming. The reader is encouraged to consider how any or all aspects of this case study could be relevant in their setting. Researchers could incorporate some or all of the study's design and methods to conduct their own research into this or similar phenomenon. Teachers could adapt the strategies and approaches described in this study for their own classroom using their own rich sources. This study explored approaches on a grade six class but the research suggests that the applications could be made at any level of education by attending to the readiness, needs, and level of sophistication of the

community of learners (Cutcher, 2013; Gamwell, 2005). This attentiveness is fostered by observation and open communication. In this study the teacher, students, and I participated in active reflections and shared ideas as an essential component of the process. These practices helped the teacher and me see and hear how the students were engaged and allowed us to effectively program with the students' needs and interests in mind.

5.3 Contributions

This case study is a single example and serves to contribute to the larger body of research that advocates for educators to consider using more sensory-based arts integration in the classroom. The study contributes to the work in this field by offering practical examples to integrate sensory-based arts pedagogies and indicates how these approaches can create positive, engaging learning experiences. It sought to explore opportunities and elaborate on the challenges and successes of the work. The study is accessible for teachers and researchers and provides advocacy for arts and sensory-based education. By attending to the qualitative relationship between what is taught and how it is taught the study answers Eisner's call for generating visions of education that value a more generous conception of what school can be with more emphasis on value, exploration, and the imagination than on measuring, discovery, and the factual (Eisner 2004).

As discussed in Chapter Two, a plethora of literature supports sensory learning for early years and primary students (Edwards, Gandini & Forman, 2012; Eisner, 2002; MacRae, 2007; Pavlou, 2013). In Victoria Pavlou's (2013) study, the primary students' creative responses were compared before and after sensory strategies were introduced. She concluded that using only one sense in an unsupported way does little to stimulate creativity but when the students were allowed to interact with original stimulus students create freer and more divergent work. This case study did not make direct before and after comparisons, as we worked in multiple disciplines and continually added layers and levels to the learning, but the premise was similar and does align with Pavlou's (2013) findings.

This case study follows Merleau-Ponty's (1992) contention that experience is the core of our knowing and that the sensory body is inexorably involved in our creativity and how we engage with the world. MacRae's (2007) work found that the process of experiencing the tactility of

the art making helped create opportunities for thinking. Joyce Brodsky (2002) corroborates this in her work when she states that the entire body is involved when creating a work of art. In this case study the material was not used simply as a way to represent ideas, rather the visceral connection to the material initiated the ideas (MacRae, 2007) simultaneously within the context of the story. Throughout the work the teacher and I witnessed the body's involvement in the learning process and the relationship between the students' movement, exploration, and communication of ideas, thoughts, and feelings through their dance work. We observed the processes of students thinking, exploring, and communicating as they drew together in their partner drawings and as they developed their movement vocabulary. I contend that the case study provided rich and meaningful experiences, but I believe it has only scratched the surface of the significance of exploring the vital role the senses and the body can play in education.

This case study supports the idea that immersion of sensory learning has potential to engage students of all ages as suggested by Cutcher (2013) and Gamwell (2005) in their studies. The teacher and I provided opportunities for the students to be immersed through the sensory and arts approaches so they could explore and express in ways that were authentic to them and developmentally appropriate for a junior class. The students' experience was at the centre of their learning, echoing aspects of the Reggio Emilia approach. Within a broad structure we encouraged the students to explore and express through their senses, in multiple groupings, and across a variety of disciplines and subjects. In as much as was possible the teacher and I provided opportunity for students to engage with the ideas and materials at their own pace and from their own points of view (Edwards, et al., 2012, Eisner, 2002). The findings in this case study support the possibilities of using adapted Reggio approaches in junior settings (Cutcher, 2013).

Specifically relating to the literature, the students in this case study worked through the stages and challenges of creating contemporary art that successfully elicited an aesthetic feeling to those who encountered it (Langer, 1967). They achieved this through their soundscapes, monster drawings, dance work, and their evocative culminating task. They transformed their sensory explorations into works that retained the original essence and meaning (Finlay & Knowles, 1995).

In this case study students worked in multiple ways to explore many facets of the topic introduced through integrated curriculum. The students' dances to express the essence of Olemaun's character demonstrated the assertion that we know "more than we can tell" (Polanyi, 1966, p.4), that we are more than just brains on sticks (Uhl, 2011), and that our bodies serve more of a purpose than to transport our heads to meetings (Robinson, 2011. p 117). Through explicit preparation that activated their awareness of emotions, ideas, and sensations, the students' movement work created opportunities to explore and express how life is experienced through the somatic self (Brodsky, 2002; Damasio, 2010; Johnson, 1987; Kiefer & Trumpp, 2012; Robinson, 2006; Stinson, 1995; Uhl, 2011). The teacher's testimonies and student reflections, as shown by the data in Chapter Four, support that the students were learning with and through their bodies. They explored, expressed, performed, and communicated ideas, thoughts, and feelings inspired by their novel study. They solved creative problems and collaborated to discover visual and physical metaphors. They united their understandings, imaginations, sensory experiences, creativity, techniques, and movements. The teacher and I provided the opportunity for the students to discover the connections between the creative process, the writing process, the elements of dance, and the relationship between ideas and movements. Students enjoyed and advocated for learning through the body. The body and mind were not only connected and aware they were in motion together. They moved the story from the inside out. The students explored physical thinking and they not only activated metacognition (Giguere, 2006) but through their dance work and reflections they engaged in meta-experience. The movement was the thinking (Amann, 2003; Hubbard, 2007; Stinson, 1995). Observations, student peer feedback and reflections support the contentions in the literature that students can learn through their bodies in ways that may not otherwise be accessible (Blumenfeld-Jones, 2009), particularly through dance where the body and mind are in motion (Giguere, 2006; Stinson 1995). The students also reported that the activities related to the movement and dance work calmed and relaxed them so they could focus (Ratey, 2008).

The case study's findings in connection to the literature regarding student engagement were contingent on a number of factors. Due to the evolution of the study it became increasingly difficult to isolate the contributing factors. The data revealed the students were engaged but the causes are not absolutely certain. In this case study the combined factors which included, but were not limited to the expertise and personalities of the teacher and researcher, individual

interests of the students, the group dynamics of the students, the sensory activities, the materials used, the delivery of the lessons, the choice of book, the arts explorations, the order of events, and the choices made by students, teacher, and researcher did contribute to student engagement. Owing to this number of variables it is impossible to conclude that the implementation of sensory arts learning positively impacted student engagement. However, the evidence suggests that it does. The students demonstrated through their actions, arts work, and reflections that the efforts we put into the sensory arts learning made the topic of study relevant to them (Dewey, 1902). Because it was relevant, they gave it attention, focus and effort. The teacher and I created the conditions to allow opportunity for the students to experience flow (Csikszentmihalyi, 1990), which encouraged them to be engaged. As stated, from my perspective as the researcher, the areas of student engagement that were most evident were attention and focus and intrinsic motivation.

5.3.1 Contributions to Students

The students in this study had the opportunity to learn creatively and holistically and made authentic connections as they experienced integrated learning. Students practiced and became more proficient in several creative and critical arts techniques across the disciplines and responded positively to their learning. The teacher reported an improvement in students' research and expository and narrative writing skills. Students engaged in explicit sensory lessons. They worked individually, in partners, small groups, and as a full class to connect to their own sensory awareness and experience of life and learning. The students learned about and through a character, a story, a culture, a history, and a complex contemporary social justice issue through their senses, by conducting research, and participating in creative and critical processes in variety of arts disciplines and language experiences. They explored ways to appreciate their own uniqueness while gaining skills to become more aware, more confident and to consider the feelings and experiences of others. They demonstrated understanding, compassion, and empathy through arts programming based on sensory experiences (Holzer, 2009; Greene, 1995). They practiced awareness and appreciation for their sensory experiences and the similarities and differences of others' sensory experiences through nonjudgmental exploration and sharing. In the process they gained skills to help them become more aware of

themselves and others. The students took active and authentic steps to work collaboratively, and communicate their understanding, passion, and concern for the personal, social, and political issues faced by the main character of the story through their culminating task. The students gained insights, reflected on their processes and engagement, and practiced recognizing and creating a state of awareness and flow (Csikszentmihalyi, 1990) as they worked within the curricular structure. The students themselves recognized that they were learning in meaningful ways. The teacher agreed and observed that the students were learning and practicing strategies that they could use throughout their lives, as suggested by Csikszentmihalyi's theory of flow (1990).

5.3.2 Contributions to the Participating Teacher

The project provided an opportunity for the teacher to collaborate on lesson planning, develop arts and sensory-based pedagogies, gain access to resources, generate meaningful student data, and consider how the learning environment supports meaningful exploration by students. The teacher had expressed his desire to start using a more sensorial approach in his work prior to the project but was not certain how to proceed. Through the study and our collaboration we explored and experimented with a variety of approaches to explicitly facilitate learning through the senses. The teacher reported that he used sensory learning after the project had finished. He further shared that ideas of engagement and flow spontaneously emerged a number of times before the end of the year. As a result he has included the approaches and the structure we developed in the project for his long-range planning and intends to introduce particular sensory lessons early in the year to foster skills, awareness, and engagement. Participation in the study gave the teacher access to resources and an opportunity to collaborate on arts education research and advocacy.

5.4 Recommendations

The following recommendations are for researchers who might wish to conduct a similar study and for teachers who might want to implement the approaches in their class or team-teach with another colleague to plan and facilitate sensory-based arts learning in their classrooms. For both teacher and researchers flexible purposing (Dewey, 1938) is recommended. It is an asset

to have an attitude of openness to go with the flow that emerges within the project rather than an approach that rigidly adheres to set plans.

5.4.1 Recommendations for Researchers

The following recommendations are for researchers who may wish to conduct a similar study:

- 1) Find a teacher who is a) collaborative; b) communicative; c) willing to have research conducted in his or her class; d) comfortable not knowing all the answers or where the research will lead; e) familiar with arts pedagogies; f) willing to actively engage in creative processes with the students and the researcher throughout the project.
- 2) Plan to conduct the research on integration that has a specific focus
- 3) Find an authentic focus and then adapt or create plans to support the focus
- 4) Prepare to deal with the challenge of time. My desire to address all the senses and all the disciplines to ensure that I gave students access to as many experiences as possible and study their responses meant that I had to move at a fairly rapid pace. I continually checked in with the teacher to make sure I was not taking too much time and he assured me that he thought some of the work could have used even more time. I appreciated that the teacher expressed one of Eisner's (2002) fundamental theories about the varied learning rates of students and how they cannot necessarily work through a creative process in a prescribed period of time. I agree that the creative process needs a lot of time. It also requires planning to balance and manage because some students don't need as much time as others and too much time waiting can invite disruption in the class. The students in this study usually had a few different projects happening simultaneously so that if they finished a task early they had choice to transition to an alternative activity. Students could always keep working. There was always the potential to explore the ideas and make different connections because of the nature of the work. The teacher and I took turns guiding the pace of the work. I found that while the creative process does take time and we tried to give the students the time they needed to fully experience the learning, it was also helpful for students to work toward a deadline. Some deadlines were more organic in that the work resolved itself and some were more imposed, as dictated by the

schedule. Our goal for the creative process was to discover, question, consider, feel, think, and solve problems along the way so that the students could have more authentic and engaging experiences within the larger structure. If I were to conduct the study again I might consider focusing on fewer senses or fewer disciplines or possibly increase the duration of the project.

For this case study I was fortunate to work with a teacher who was very congenial, appreciative, and generous with his time and expertise. We communicated very well and had respect for each other's styles and strengths. The teacher and I were both willing to take creative risks and were open to the process of finding the most authentic path for the work.

5.4.2 Recommendations for Teachers

The following recommendations are offered to teachers who may wish to implement sensory-based arts strategies in their own classrooms.

- 1) Integrate the sensory explorations with arts curriculum. As arts educators the teacher and I discussed the natural connections between the senses and the arts and were interested in exploring these possibilities with the students. Working this way was equitable, inclusive, and created authentic connections between the students' lives and the material they encounter.
- 2) Integrate the arts curriculum with a meaningful source. This was a key element of the project that proved to provide the opportunity to deepen the learning experience for the students.
- 3) Assess strengths, areas of growth, and willingness to work with the various aspects of the curriculum for all participants. In this particular study the sense of sight was not given as much explicit attention as the other senses. The teacher, being an experienced visual arts educator and an accomplished artist himself had continually embedded several rich visual lessons throughout the year. As a result, I decided to focus on senses that are addressed less often in regular junior classroom programming. I also wanted to offer programming to the class in less familiar areas of the arts curriculum so that everyone had an opportunity to benefit from the collaborative process. Had I been working with a teacher less experienced in visual arts I would have put more emphasis of the sense of sight and programmed more explicit visual learning opportunities.

4) Find a focus for the work so that it is not too overwhelming to tie various senses, disciplines, techniques, subjects, etc. together.

5) Be patient with the process and the level of development, awareness, receptivity, and readiness of the students. Not every lesson may seem successful but can be used as an opportunity for learning and can yield surprises. In this study every day and every experience was a new opportunity. Students responded differently depending on a plethora of variables. For example, I had thought the opening lesson on engagement and flow might have been too dry and not as effective as the more active lessons but I learned later that the information and ideas resonated quite profoundly with the students.

6) Ideally the integration should be authentic and not forced. The learning should be balanced and fit seamlessly into the curriculum.

This study has shown that sensory arts learning strategies are effective to pique students' curiosity, increase their engagement, expand and deepen their understanding and enjoyment of the learning experience. The learning can be explicit or subtle depending on the particular needs of the classroom. The intention for the study was not to suggest that sensory arts learning be the only way to learn material and engage students. The teacher needs to discern the appropriate application of sensory learning. Similarly, while it is useful for students to learn how to be aware of their own engagement and flow, it would simply not be practical or socially acceptable to be attempting to achieve this intense awareness all the time. Individual students come to the work from unique and diverse interests, backgrounds, abilities, experience and preference. Providing opportunities to learn and practice strategies that help each student gain a deeper understanding of how they are engaged and interact with the world can be very empowering for the individual student and for the learning community. Teaching students how they can recognize and initiate a state of flow for themselves has positive effects and the potential to be a life changing skill.

5.5 Conclusion

This case study researched the potential of sensory-based arts pedagogies in a junior classroom to explore programming possibilities and investigate the impact that sensory-based arts

pedagogies might have on students' engagement. In an age where standardized testing is the prime measurement of 'success' and the reliance on technology potentially diminishes live interactions and sensory, physical experiences, students benefit from opportunities to experience their learning in multiple ways. Sensory-based arts learning is, for the most part, inclusive and accessible to students who may have physical or sensorial challenges. The approaches and ideas introduced in this study are adaptable across senses, disciplines, and subjects. Students learn with what they bring to school: their bodies. They do not require special clothing, equipment, expensive texts or technology. Learning how to use the senses and the body to explore, understand, remember, and express is an authentic way to interact with the world that is accessible at any time and a skill for life.

As an artist, teacher, researcher, and student, I contend that sensory-based arts pedagogies in the junior classroom create potential for engagement and meaningful learning. This case study has provided another lens through which to view sensory learning and arts programming in the junior division and contributes to the on-going work of research in this field. The study has given voice to educators and students and provided additional perspectives and evidence that the mind-body connection and sensory awareness can play a fundamental role in providing opportunities for students to learn and engage meaningfully and authentically in multiple modes. In this respect, rather than depending solely on test scores to measure and account for student learning (Eisner, 1998), the quality of the learning experience and the definition of student success can become broader, more inclusive, and meaningful.

Through this case study I have witnessed the power of meaningful integration and the importance of taking the time to observe and listen carefully to what truly motivates and engages students to ensure that their learning needs are appreciated and supported. Providing opportunities for students to experience learning through their senses has the potential to connect them deeply and immerse them in the material. The study advocates for educators to provide opportunities for junior students to explore, learn, and express their thoughts, ideas, and feelings by engaging in creative arts processes inspired by rich personal and social source material. The study has found that thoughtful integration and explicit and embedded sensory-based arts pedagogies create authentic possibilities for positive, engaging, meaningful, and memorable learning.

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Appendices

Appendix A: Letter of Information

Confidential
Principal
Confidential Elementary School
1 *Confidential* Street
X1X 1X1

January 8, 2015

Re Project Title: Sensory-Based Arts Education and Engagement in the Junior Classroom: Exploring Multiple Ways of Knowing and Meaning

Principal Investigator: Rachel Heydon, Western University

Researcher: Tracy Thomson

Dear *Confidential Principal*,

Confidential teacher name, an exemplary arts educator in your school, is being invited to participate in a research study to investigate the potential of sensory-based arts strategies on junior students' engagement.

Purpose of the Letter: The purpose of this letter is to provide you with information and request permission to conduct the research in *Confidential teacher name*'s classroom.

Purpose of this Study: The purpose of this study is to provide opportunities for sensory-based arts pedagogies and to explore how the pedagogies may impact student engagement in a junior setting. The research will investigate multiple ways that students learn and make meaning through a variety of strategies that explicitly activate sensory and mind-body awareness.

Inclusion Criteria: The researcher has selected *Confidential teacher name*, an experienced arts educator who is teaching the grade six arts curriculum this year (2014-2015), to participate in the study. Only one teacher is required to participate in this research.

Study Procedures: The teacher will be invited to collaborate with the researcher to develop class plans that align with current programming. The researcher would like to observe and record in the classroom, approximately once a week, at intervals and times agreeable to the schedule, over a period of two months. The teacher will be asked to participate in three brief interviews, one at the beginning of the study, one mid way through and a final interview so the researcher can share interpretations of data. The researcher will travel to the teacher for all planning and interview sessions. The observations will be conducted in the classroom during school hours. Questions and materials will be provided in advance of meetings for efficiency. The teacher will be invited to keep a reflective journal throughout the process and will do so at the teacher's own discretion.

Time commitments:

- At least one hour to initiate the planning. Follow-up may occur via email or on a googledoc. The researcher will be available to provide resources and collaborate (time spent developing the plans will be at the participating teacher's discretion).
- Up to one hour for the first interview, a half hour for the mid point interview and up to one hour for the final interview
- Time spent on the reflective journal and planning is at the teacher's discretion

Possible Risks and Harms: There are no known or anticipated risks or discomforts associated with participating in this study. The strategies will align with the Ontario curriculum and follow Ontario College of Teachers and the *Confidential* School Board's code of conduct.

Possible Benefits: The project provides an opportunity for the teacher to collaborate on lesson planning, gain access to resources, and generate meaningful student data. The teacher may use the project to incorporate into their long-range planning and professional annual learning plans. The project invites the teacher to contribute to arts education research and advocacy and may result in opportunities for the teacher to co-present at workshops and conferences. The benefits to students may include opportunities to discover individual, creative and holistic ways of learning and making meaning and to cultivate sense of self and well being as they engage in the arts experiences.

Compensation: There is no monetary compensation for participation in the research but the researcher will provide refreshments for planning sessions and interviews. There are no costs to the teacher, school or students. The researcher will travel to the teacher's location.

Voluntary Participation: Participation in this study is voluntary. Teacher and students may decline participation, refuse to answer any questions, or withdraw from the study at any time with no negative effects.

Confidentiality: All data collected will remain confidential and accessible only to the investigators of this study. If the results are published, your name will not be used. Representatives of The University of Western Ontario Non-Medical Research Ethics Board may contact you or require access to your study-related records to monitor the conduct of the research.

Contacts for Further Information: If you require any further information regarding this research project or your participation in the study you may contact Tracy Thomson,
xxxxxxxxxx

If you have any questions about your rights as a research participant or the conduct of this study, you may contact The Office of Research Ethics xxx xxx xxxx, email: xxxxx Dr. Rachel Heydon is the Principal Investigator and supervisor for this research project, [xxxxxxxxxxxx](#)

Publication: If the results of the study are published, school, teacher and student names will not be used. The board requires a copy of the final report. If you would like to receive a copy of any potential study results, please contact Tracy Thomson, xxxxxxxxxxxxxx

Consent: Please sign attached Consent Form to indicate your willingness to allow the study to occur at *Confidential* Elementary School.

Thank you very much.

Sincerely,

Tracy Thomson
B.A., B.F.A., B.Ed., OCT
Educator with the *Confidential* School Board and Western University Master’s Candidate

This letter is yours to keep for future reference.

Consent Form

Project Title: Sensory-Based Arts Education and Engagement in the Junior Classroom:
Exploring Multiple Ways of Knowing and Meaning

Study Investigator’s Name: Tracy Thomson (Dr. Rachel Heydon, supervisor)

I have read the Letter of Information, have had the nature of the study explained to me and I agree to allow the study to be conducted at *Confidential* Elementary School. All questions have been answered to my satisfaction.

Principal’s Name (please print): _____

Principal’s Signature: _____

Date: _____

Appendix B: Assent Letter

Assent Letter

Project Title: Sensory-Based Arts Education and Engagement in the Junior Classroom:

Exploring Multiple Ways of Knowing and Meaning

Study Investigator: Tracy Thomson, Education, Western University

1. **What is happening in your class?** Ms. Thomson is conducting a research study to learn the effectiveness of arts strategies in your classroom.
2. **Why?** Ms. Thomson is interested to see how students respond to different arts activities.
3. **What will happen?**
 - a. Ms. Thomson will observe arts lessons and write down some of your responses during the work
 - b. She may digitally record parts of a lesson to help her remember things students do or say
 - c. You may be asked to share copies of your work to use as examples for the study.
4. **Will there be any tests or extra work?** There will be no tests and there is no extra work involved in the study.
5. **Will the study help me?** The study is designed to explore progressive ideas in arts education that may help you and other students discover new ways to learn.
6. **What if I have questions about the study?** If you have questions at any time, you can ask Ms. Thomson.
7. **Do I have to be in the study?** You do not have to participate in the study. Everyone will be participating in the class as always. There will be no difference in the amount of arts work you will be expected to do either way. If you do participate in the study it means that you are giving the researcher permission to gather data in the classroom by recording your responses to the lessons. This may include writing down things you do or say during the lesson. She may also ask for permission to take a photo of your work or copy an excerpt of writing to use as an example for her research report. Your participation will be confidential. You may also withdraw your participation at any point during the research.

Thank you.

I want to participate in this study

Print Name of student _____ **Date** _____

Signature of student _____ **Age** _____

Signature of Person Obtaining Consent _____

Appendix C: Parent Permission Letter

January 15, 2015

Dear Families,

Your child's arts class has been selected to be part of a research study to investigate the effectiveness of sensory-based arts pedagogies in connection with the arts curriculum. This letter is to provide you (as parent/legal guardian) with the information you need in order to make an informed decision as to whether you want your child to be part of the study procedures.

The researcher, Tracy Thomson, is a specialist in dance, visual arts and drama. She has been a teacher with the *Confidential* school board for 14 years and an arts instructional leader for two years. The research will include Ms. Thomson planning with the teacher and visiting the class to observe and take notes approximately once a week for two months. She may digitally record brief segments of the lessons to capture the processes of creating the work in order to confirm her observation notes and to assist in the accuracy of gathering what students do and say during the arts lessons. This data will only be used as educational research in connection with this study. She may ask to photograph artwork or copy excerpts of written work to use as student samples in the final thesis to help illustrate strategies and student responses. All original work will remain the property of the students. Students will not be identified in the study and all participation will be confidential.

As a member of the class, your child is invited, but is not required, to participate in the study. Participating/non-participating students will be doing exactly the same schoolwork. A strategy is in place to ensure that observation/recording is organized and positioned to include only students who are participating in the study and will not impede the regular flow of activities. A student's participation/non-participation will have no influence on regular assessment or grades. All activities align with the Ontario curriculum and support regular lesson programming.

If you have any questions regarding the study, please feel free to contact Tracy Thomson at xxxxxxxxxx or her supervisor, Dr. Rachel Heydon xxxxxxxxxx Thank you for your consideration.

Sincerely,

Tracy Thomson

I hereby give permission for _____ (*name of student*) to participate in the study conducted by Tracy Thomson for Western University and the *Confidential* School Board. This includes permission for the student to be recorded during classroom activities and samples of the student's work to be used in the study. I understand that the study will be completely confidential and that I may ask about the study at any time.

Signature: _____ Date: _____

Appendix D: Email Script for Recruitment

Subject Line: Invitation to participate in research

You are being invited to participate in a research study conducted by Tracy Thomson, *Confidential School Board*, teacher and master's candidate at Western University. Briefly, the study will investigate how sensory-based arts pedagogies contribute to the learning and engagement of junior students. It will involve collaborative planning with the researcher, opportunities for the researcher to observe in your classroom, and participation in three brief interviews.

The researcher is looking for one teacher who has experience in arts education and who is teaching the arts curriculum to a grade six class during this 2014-2015 school year.

If you have questions or would like to receive a letter of information about the study please contact the researcher at the contact information given below.

Thank you,

Tracy Thomson

Western University (master's candidate)

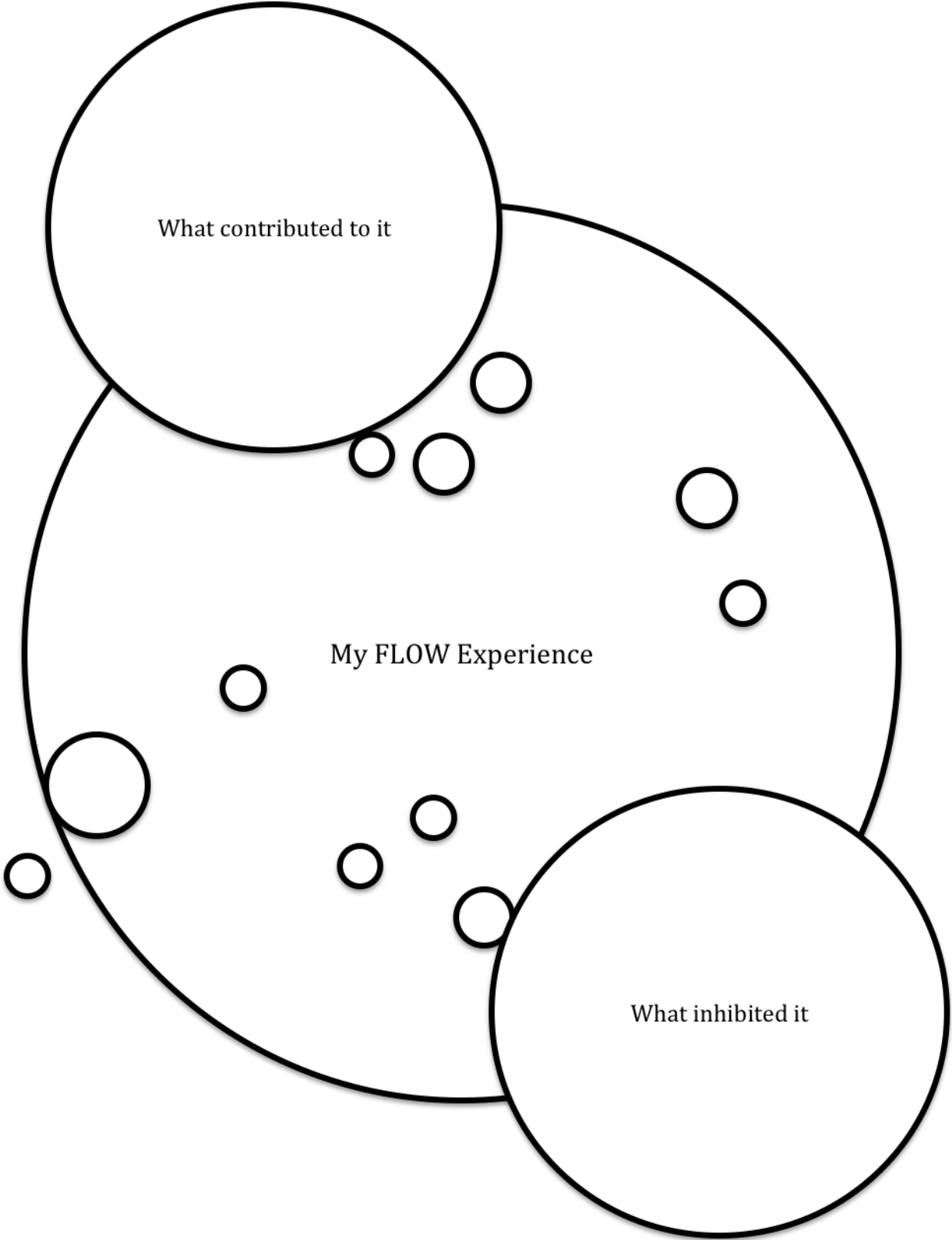
XXXXXXXXXXXXX

The Principal Investigator and supervisor for this research project is Dr. Rachel Heydon,
Western University XXXXXXXXXXXXX

Appendix F: Diagnostic

What engages me in school?	What do I think learning is?
What do I like to learn?	How do I like to learn?

Feel free to use the back to draw or continue writing your response 😊



Appendix G: Lesson: A Matter of Taste

Page 1 Taste Lesson

To enhance sense awareness and somatic presence, to cultivate gratitude and appreciation for the moment, to heighten attention and attunement skills (Rechtschaffen, 2014)

Need hands washed, tissue on each cleared desk, bowl of blueberries, serving spoon

Taste Script: Eating mindfully - a meditation:

This script is based on Rechtschaffen (2014) to use as a guideline. The teacher should feel free to improvise.

Settle in and take a few breaths in and out – nice and calm....

Today we are going to learn how to be mindful of something new. We are going to do something that we do all the time and that most of us really enjoy – but we are often not mindful about how we do it. In fact, we often do it mindlessly and when we do that we miss out on the chance to really enjoy it. So today we are going to try mindful eating. We are going to practice this with blueberries.

We are each going to get two blueberries. (serve 2 bbs to each student)

We are not going to eat them right away. We will begin by looking very closely and carefully at them, as if you were a scientist looking at them under a microscope. Imagine you have never seen a blueberry before. Look carefully at the size, colour, and shape. Is it the same all over or are there variations? Do the two blueberries look the same or are there differences? You can pick one up, turn it and hold it up to the light. What do you see?

Now let's smell it. Take one blueberry, close your eyes and give it a good sniff. What does it smell like? Does it remind you of anything?

Close your eyes again and pick up a blueberry, carefully roll it in your fingers or across your palm. Be careful not to squeeze it too hard.

What is the texture? What does it feel like? What does it remind you of?

Take the blueberry and roll it in your fingers again. Hold it up to your ear? We must be absolutely quiet. Can you hear anything? How would you describe how it sounds?

Soon we get to taste. What happens in our mouth in anticipation of eating? When I say so we are going to move in slow motion to put the blueberry onto our tongues and close our mouths – but we won't chew – we're going to roll the blueberry around in our mouth and see what it feels like and tastes like. Okay go - Close your eyes and really focus. What is the texture – Think about it feels.

Now slowly and carefully take a bite, pause in between each bite to really sense what happens. Really notice - How does it feel? What do you taste? How does your mouth move? How does your jaw move? How does your tongue move? Chew very slowly and when you are finished chewing, notice how it feels as you swallow.

For the second blueberry - you may want to try to peel it - to see what it looks, smells and feels like inside and then you can eat it slowly and mindfully.

Usually we eat berries, grapes, raisins in bunches without much thought or consideration - Imagine if we paid this much attention to everything we ate. How might that impact our lives? Option to consider where the blueberries came from... how grown, travelled, processed, marketed, etc – connect to SS.

Once you have tried it, remember you don't have to eat everything super slow – the idea is to learn to be aware and appreciate the sensations that the food and the act of eating it provide. It just means we can focus on it a bit more so that we really enjoy it!

Page 2

Taste Response

Name: _____ Date: _____

The blueberry before, or as it is being eaten: (Use words, lines, shapes, colours, and textures inspired by the blueberry to describe/illustrate the sensations)



How is eating mindfully different from how you usually eat?

What else could you eat mindfully?

What else in your life might benefit from sensory awareness and being slowed down?

Appendix H: Lesson: The Olfactory Sense: Smells Like...

Page 1 Lesson

Each group of 5 students get scent response sheets and a set of sample jars labeled A to E.

Students take turns smelling the various sample jars and then decide on one to respond to on the sheet. The sheet and the experience of the smell can be used as raw material for a poem, a drawing, a painting, a sculptural piece or a dance.

Students can also write an artist statement to accompany these.

In the statement students will include why they chose the form they did and how the elements and materials were used to create the meaning.

Page 2 Response

Name: _____ Date: _____ Sample _____

THOUGHTS/IDEAS	PHYSICAL FEELINGS
EMOTIONAL FEELINGS	COLOUR(S)
SHAPES/LINES	SOUNDS
OTHER CONNECTIONS	NAME THE SMELL

Feel free to use the back to draw or continue writing your response ☺

Appendix I: Lesson: Feeling the Curriculum

There are 4 different textures set up at each station. Rotate through the classroom and feel the textures. For each texture please respond below.

Name: _____ **Date:** _____ **Texture:** _____

1. How does the texture make you feel?
2. What does it remind you of?
3. What would you make with it?

Appendix J: Classroom Observation Template

Date: _____

Learning Goals:	Lesson Focus:
Assessment:	Curriculum/Student expectations:
Modifications:	Materials/ Sources:
Sensory areas addressed:	How are senses activated?
<ul style="list-style-type: none"> • Approaches: • Teacher directed • Instructional: Demo • Collaborative: Group work • Inclusion: Students choose entry points 	<ul style="list-style-type: none"> • Convergent Discovery: Research • Divergent Production: Alt. ways to do a task • Experiential: Hands on • Learner Initiated: Learner initiates and uses teacher as needed
How are the ideas/topic are generated?	How are the creative processes introduced?
Teacher Body language (TBL):	Student body language (SBL):

Teacher Quotes (TQ):	Student Quotes (SQ):
Emotional connection (E):	Interest & Attention (IA):
Curiosity ©:	Students demonstrate understanding of concepts (U)
Motivation & Participation (M):	Excitement for active learning (AL):
Perceived importance (PI):	Perceived efficacy (PE):
Anecdotal Remarks:	

Appendix K: Interview One Protocol

The purpose of this interview is to establish the teacher's arts education background and philosophical approach, establish the context of the setting, and focus on sensory-based arts education possibilities.

Section 1 questions: Before we get into the research details I am interested in your work as an artist and as a teacher, how these roles intersect and complement ...

As an artist, do you have specific strategies that you use to explore ideas?

Knowing that not every creative process is the same, as a teacher, how do you invite students to participate in creative processes?

What do you feel are your most successful strategies and why? What do you find most challenging?

What influences or motivates your arts teaching?

Section 2 questions: Tell me a little bit about your class and the school. Please share anything that you think is of interest that would put the setting into context (broad demographics, particular considerations, tendencies, perceived values, philosophies, and interests).

Section 3 questions: What sensory-based strategies have you tried or are you currently using in your teaching?

What sensory-based teaching strategies are you interested in exploring in the classroom?

How do you think using sensory-based strategies might benefit your class?

What do you think the challenges might be in using these approaches?

Let's discuss ways to meaningfully embed these strategies (initiate the planning).

Are there any other questions or concerns you have about the work?

Is there anything else that you would like to add?

Appendix L: Interview Two Protocol

The purpose of this mid-point interview is to check in on how the teacher is feeling about the progress of the work, to reflect on what has occurred, and assess if the learning goals are still the same. The teacher and I will determine if adjustments or refinements are needed, or if more support is necessary as they prepare for the final stages. The interview is one opportunity to make the process and the reflections on the process explicit.

How are you feeling about the progress of the work so far in the classroom?

What do you think are the strengths of students engaging in the sensory awareness activities?

What have the challenges been?

Do you feel that there is authentic connection between what we have been planning and the work you had intended to do with the students?

It may be too early to tell how the students are consolidating the learning, but do you think students are engaging in their work on a deeper level by practicing these sense awareness activities and if so are there specific examples that you can share?

I am interested in your perspective on this work– and how it may have shifted/changed/evolved from when you originally showed interest in the research?

We began by going in on a bit of an exploration – we had a plan but were not sure what we were going to do in terms of integrating the sensory work because it truly could have gone in several different directions. How are you feeling about our decision to focus it on the book?

Has this work impacted how you might approach your arts planning or implementation – and if so how?

You mentioned you had taught *Fatty Legs* before. Can we talk about how approaching the work this way is different than how you may have done it in the past... perhaps referring specifically to *Fatty Legs* and/or in a broader way to integrating all the arts and social studies with the sensory learning?

Eg:

- *Novel study*
- *Novel study + social studies*
- *Novel study + arts (variables of the different curriculum strands/disciplines)*
- *Novel study + sensory awareness approaches*
- *Novel study + sensory + arts + social studies*

Planning:

Have the goals for the students shifted? (What they are learning /how they are learning?)

What can we do in the next few sessions to consolidate the learning?

How can we support and deepen the quality of their experience?

Appendix M: Interview Three Protocol

The purpose of the final interview is to give the teacher an opportunity to reflect on the process of the research project in the classroom, their learning experience, and the impact it has had on the students. It will share my interpretation of the data and give the teacher an opportunity to corroborate the findings.

For reference: My Main Research Questions: What opportunities for learning and engagement do sensory-based arts pedagogies provide for junior students?

How might sensory-based arts pedagogies be best structured & positioned to provide relevant & meaningful learning opportunities to junior students?

How might experiences that focus on sensory, mind body-awareness, & the imagination contribute to students' learning, engagement & meaning making?

Some time has passed since we finished the book and the sensory work for the research. We'll have a list of the different classroom events on hand to refresh our memories for reference.

What do you feel were the most significant aspects of the project?:

for you as an educator/for your programming /for the students

What were the least significant (or least successful) aspects of the project?:

for you as an educator/ for your programming /for the students

Have you used any of the strategies since?

If so – how were they similar/different – did you learn anything new or want to share a different/better way to do it (different variables –students/content/background)? Were these planned/spontaneous? Any surprises?

Would you use any of these strategies again? – We could spend some time brainstorming other possible applications for sensory-based learning

Have students demonstrated the concept of sensory engagement or flow since the research ended?

Please share **examples** of students voicing strong opinions/ideas about the story, character or broader issue – or had dialogue or debate with one another – that demonstrated their passion, investment or engagement with the material since the sensory work?

If you were to do this work again what would you change? Recommendations- ideal timing/ time of year/content/ frequency/ structure/ materials/ resources/ professional development

Could you imagine the sensory approach being successful apart from the arts learning? In other words, what are your thoughts about how the arts and sensory learning complemented each other & could you imagine a teacher leading the sensory work for different subject matter without the arts component?

Discuss process of **co planning, co teaching, co-observing** – the **response of the students** with me as an outsider coming in – **any noticeable shifts post project?**

I will share my interpretations of the data for us to discuss...

Any final thoughts or questions?

Curriculum Vitae

Name:	Tracy Thomson
Post-secondary Education and Degrees:	Western University London, Ontario 2013-2015 M.A. Education
	Ontario College of Art and Design Toronto, Ontario, Canada 1992-1996, 2004-2006 B.F.A. with Distinction, Integrated Media
	The University of Ottawa Ottawa, Ontario, Canada 2000-2001 B.Ed. Magna Cum Laude, (Primary/Junior Divisions)
	York University Toronto, Ontario, Canada 1982-1984, 1997-2000 B.A. Fine Arts
Additional Qualifications	Drama: Senior ABQ, Intermediate ABQ, Part 2 and 3 Specialist Visual Arts: Parts 1, 2 and Honours Specialist AQs Music: Primary/Junior Vocal Part 1 AQ Dance: Part 1, Part 2 and Part 3 Specialist AQs
Honours and Awards:	Canadian Graduate Scholarship- Master's (CGS M) 2014 Province of Ontario Graduate Scholarship (OGS M) 2014 Western Graduate Research Scholarship (WGRS) 2013-2014 and 2014-2015
Related Work Experience	Teacher, Central Instructional Leader Teaching and Learning, Arts Department Confidential District School Board, Ontario, 2001-2015
Publications:	Ontario Elementary Social Studies Teacher's Association, Support Document for Social Studies Curriculum, 2013
	Art Image Publications, Grade 5 & Grade 8 Visual Arts Units, 2011
	Council of Ontario Dance and Drama Educators/Ministry of Education, <i>In or Out: Integrated Junior Critical Literacy Unit</i> , 2010
	Ontario Art Education Association/Ministry of Education, <i>My World: Integrated Visual Arts Unit, Primary Painting</i> , 2009