Multi-Sensory Environments: A Qualitative Exploration

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Abstract

Multi-Sensory Environments (MSEs) originated in the Netherlands during the 1970s as a form of recreation for those individuals with profound intellectual and multiple disabilities (PIMDs) (Brug, Van der Putten, & Vlaskamp, 2013). Since then, MSEs have shifted from a localized practice to a global movement in the fields of medicine, education and therapy (Pagliano, 1999). A lack of quantitative analysis into the use and efficacy of MSEs has led to an emergent critique of their value, despite anecdotal reports and positive qualitative outcomes reported in some studies (Haegele & Porretta, 2014).

In this study, I use a critical analysis approach, involving the application of an immanent critique and a genealogical analysis (Miró-Bonet, Bover-Bover, Moreno-Mulet, Miró-Bonet & Zaforteza-Lallemand, 2013) to explore the practical and theoretical benefits, advantages, and potential of MSEs in education; as well as the challenges, problems, and limitations of MSEs in education, specifically in a Manitoba K-12 context. I hope to better understand how an inclusive educational framework relates to the conceptualization and implementation of Multi-Sensory Environments. Finally, I discuss the implications of MSEs in teaching, learning, and possible areas for future research.

This qualitative study into Multi-Sensory Environments in schools was conducted in Manitoba, Canada. Four educators from two different school divisions took part. The participants held various positions within their divisions, including Occupational Therapy, Administration (Principal/Vice-Principal), and Senior Administration. One of the participating divisions was rural and the other was urban. Each participant was interviewed twice, spaced at least two weeks apart. In addition, two participants provided photographs of their Multi-Sensory Environments for comparative analysis. The data were explored thematically, revealing consistent and unique trends in the use, conceptualization, equipment and the ideological basis surrounding Multi-Sensory Environments. The findings support a need for continued educational and professional training, divisional and cross-divisional

collaboration, provincial and divisional guidelines, and policies and procedures in the areas

of inclusion with respect to Multi-Sensory Environments and Snoezelen experiences.

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Chapter 1

Introduction

Our encompassing world ebbs and flows with ease and variance every day. Taking notice of these happenings requires attention, forethought and even intentional concentration. Perception in the real world is multi-sensory (Chalmers, Debattista & Ramic-Brkic, 2009). As we move and interact with the environment around us, we inhabit the space with all our sensory faculties. Many people learn about our environment by seeing, hearing, touching, tasting and smelling these environments. Moreover, evolution has designed our brains so that our senses work in concert. Objects and events can be detected rapidly, identified correctly, and responded to appropriately because our brains use information derived from different sensory channels cooperatively (Yildirim & Jacobs, 2011).

Proponents of Multi-Sensory Environments (MSEs) seek to offer alternative spaces for sensory exploration, enlacing student directed leisure and educative potentialities throughout. In this thesis, I explored the use of MSEs within Manitoba Schools K-12 in an effort to bring to the fore a meaningful discourse on the subject. I also hope to promote a spirit of inclusion, efficacy and best practice with respect to the education of students with Profound Intellectual and Multiple Disabilities (PIMDs).

In this introductory chapter, I provide a brief historical overview of Snoezelen, followed by operation definitions of key terms. I also will provide a rationale for inclusive practices within the contexts of MSEs. MSEs are nonproprietary offshoots of an original concept, namely Snoezelen. A comparison and contrast between Snoezelen and MSEs will be discussed in Chapter 1. Moreover, an inclusive conceptualization framework (Calvino & McLaughlin, 2014), that specifically pertains to MSEs, will be proposed. A review of the relevant literature is contained in Chapter Two. This chapter is presented as a critical

analysis, using an immanent critique (Antonio, 1981) and genealogical analysis (Miró-Bonet et al., 2013), and by applying the inclusive conceptualization framework of Carlo Emilio Gadda (Calvino & McLaughlin, 2014). The discussion and research methodology is outlined in Chapter Three. The findings are presented and discussed in Chapter Four and the implications, limitations, recommendations and conclusions are presented in Chapter Five.

Historical Development and Theory of Snoezelen (1960-present)

The concept of Snoezelen is both a philosophical idea and the original idea for the creation of MSEs. Snoezelen is a contraction of two Dutch words that are the equivalents for English "sniffing" and "dozing" (Verheul, 2009). It is a mindset that focuses on the isolation of, and concentration on, one or more of the senses. Isolating sensorial stimuli promotes a participant centered approach to sensory exploration, regulation and education. A Snoezelen approach can take place both inside and outdoors. Snoezelen, is the original concept that lead to the creation of MSEs. The original intention was a person-centered space where control, exploration and relaxation could take place in a more power neutral environment controlled by the participant (such as individuals with PIMDs). It is worth noting, since the term Snoezelen was copyrighted, various forms of MSEs have emerged that are unconnected to the Snoezelen approach. The overlap and differences between Snoezelen and MSEs will be discussed at length throughout Chapter 1.

Prior to the 1960s, active sensory explorations in institutional or educative settings were extreme limited, if not non-existent. While localized variations have existed since the early 19th Century, mass acceptance and usage of such methods have remained elusive. In 1966, Cleland and Clark came up with the idea to create a "sensory cafeteria" or a room in which people with intellectual disabilities could have the chance to experience the different senses (Verheul, 2009). The "sensory cafeteria" has remained a seminal idea in this area in

the USA. However, the scope of impact in the work done in the Netherlands remains unclear.

Nevertheless, what followed in its wake was born out of growing institutional and social

problems. Verheul (2009) noted that, in the middle of the seventies, the Dutch institutions for

the mentally disabled also were confronted by growing problems with severely disabled

individuals (Verheul, 2009). These problems primarily surrounded their lack of engagement,

leisure, equality, role efficacy and role valorization (Wolfensberger, 2013). Having those

with PIMDs engage in meaningful ways with their environments and with others was a gap

that required adjustment. This was in part due to severe institutional settings and limited

meaningful staff interaction. Jan Hulsegge and Ad Verheul attempted to confront this

challenge.

The first project, when the name Snoezelen was developed, occurred in 1974 at the

Haarendael Institute. The aim was to let people with disabilities experience wellbeing, by

trying to create a situation in which they could engage in a variety of sensory activities, but

also enjoy them passively (Verheul, 2009). Throughout the next few years, Jan Hulsegge and

Ad Verheul developed their idea of Snoezelen with various collaborative and experimental

interactions. By 1978, their idea was put into public action for the very first time at the De

Hartenbergs summer fair. An experimental sensory tent offering multi-sensory experiences

was put up (Verheul, 2009). "In this tent, all kinds of activities took place in which the senses

were stimulated in a 'selective' and 'well-balanced' way" (Verheul, 2009). The variety and

ingenuity of these experiments were truly groundbreaking. Engaging those with PIMDs was

certainly not a common practice in the 1970s, especially within a leisure or sensory context.

There were many elements included within the 1978 tent (Verheul, 2009).

- A room with a blower that blew shreds of paper and balloons through the
  room.

- A corner with soft cushions and hay in which squeaky toys were hidden.

- There was also a room with an overhead projector on which a bowl of water was placed. By dipping ink into the water, fabulous coloured patterns were created on a white screen.

- One corridor was the sound department. All kinds of sounds could be heard from speakers or headphones.

- There was a rack with several musical instruments mounted on it, which looked very attractive.

- There was also a "smells" department: a table on which a selection of fragrant objects was placed, like scent bottles, soaps, herbs, etc.

- Tactile objects were hung from the ceiling, including a woolen curtain and squeaky toys.

- There were water and sand trays, a papier-mâché table and a foam tray.

- There were trays with foods that tasted either salty, sweet, sour or bitter.

- At the end of a maze there was a large tray filled with gravel, another part with sand, etc., so participants could experience different sounds and sensations while walking on different surfaces (Verheul, 2009).

Out of the 1978 multi-sensory environment came profound changes to a once experimental technique. By February 1984, Snoezelen was offered on a permanent basis in its own rooms (Verheul, 2009).

Today, MSEs exist around the world. Snoezelen MSEs can be found in educational and clinical settings in over 30 countries with thousands of officially installed environments. This does not take into account the number of other environments that may have been influenced by the Snoezelen approach (Haegele &

Porretta, 2014). Nevertheless, the forms they take and purposes they garner are varied. The original theory purports that the aims of Snoezelen are closely linked to the problems and possibilities of the target group. Some definitions from Verheul (2009) are listed below.

- "Snoezelen" is a selective offer of primary stimuli in an attractive setting.
- "Snoezelen" means a specially designed environment where well-being is to be caused by controllable multi sensorial stimuli.
- "Snoezelen" offers individuals with intellectual disabilities opportunity to function in other ways: particularly by being active, tasting, smelling, touching and moving (not because they like it, not to acquire information, not to learn or develop from it, but because it suits the needs and possibilities of people with severe intellectual disabilities better than traditional institutional environments). In essence, learning.
- "Snoezelen" is a primary activation of individuals with intellectual disabilities, especially aimed at sensory perception and experience, by means of light, sound, touch, smell and taste.
- "Snoezelen" is creating authentic experiences for those who are different.

Snoezelen also exists in a variety of venues. Although, today, a MSE often is conceptualized as located in a specific room, Snoezelen simply existed where our senses settled to explore. Within this thesis, I will identify MSEs and their locale. However, the definition of Snoezelen is vast and allows for many possibilities and applications (Haegele & Porretta, 2014).

The broad possibilities encompassing "Snoezelen" make it difficult to form a picture of what it is in concrete terms. A few examples may illustrate this:

Lying in a meadow chewing a stalk of grass we watch the clouds pass overhead. We are very comfortable; the sounds of the traffic is far away; we hear nothing but the croaking of the frogs and the wind rushing in the reeds. We can smell the fresh grass and feel utterly contented. Nothing changes until the wisps of overgrown dandelions, carried by the wind, attract our attention. We try to catch a few of these little parachutes. Later, we pick the overgrown dandelions and blow the wisps and watch them drift away until they are out of sight. After all this sniffing at the grass and meadow flowers we doze off a little. It is simply lovely, such an afternoon of "Snoezelen"!

Whirling snowflakes – I watch them melt away into drops of water when they stick to the warm windowpane. The mellow tones of a harp, coming from my stereo, drift through the room. I sink into my lazy chair and stare at the flames in the fireplace. With a pair of tongs I shift some of the logs; the sparks perform a capricious dance; I try following them with my eyes. The smell of fresh pine tickles my nostrils. I take a sip of my wine, mmmm, delicious! The wine makes me feel drowsy and I doze off a little. A wonderful night of "Snoezelen"! (Hulsegge & Verheul, 1987, pg. 31-32)

As Jan Hulsegge and Ad Verheul contend, in both examples, there was a primary address of the senses, in attractive surroundings. From these examples it becomes clear that "Snoezelen" is not restricted to a particular place.

You can do it both indoors and out. I let all stimuli come to me. Through the senses and the nervous system they reach the brain and cause a pleasant experience. Decisive in this situation is the fact that I participated actively: I

pick a dandelion, I shift the logs in the fireplace (Hulsegge & Verheul, 1987, pg. 32).

Snoezelen's representative qualities, as delineated by its creators, reside in its approach of freedom, relaxation, exploration, discovery and finding an equilibrium of the senses. According to this nondirectional approach, professionals entering the Snoezelen MSE act as enablers for the participants. Enablers are not direct participants in a specific manner or routine. Instead, they are expected to share common positive emotional experiences with users while involved in activities together. The goal of the enabler is to assist participants to gain pleasure from the activities they are jointly involved in (Haegele & Porretta, 2014).

The Pros of Snoezelen

Jan Hulsegge and Ad Verheul, in an attempt to remain thorough, also listed some 'pros' and potential 'cons' of Snoezelen. Although their ideas remain highly subjective, and are grounded in different experiences and contexts, namely working with individuals with PIMDs, they are recounted below.

According to the two founders, there are at least eight 'pros' to Snoezelen. First, the visitors do not have to be accompanied by a "specialist". More than ever, parents can be regarded as experts. By elevating the position of the visitor, and eliminating that need for a "specialist", staff or parents can interact with the participant with full confidence. Furthermore, the removal of a "specialization" requirement makes the Snoezelen concept portable, fluid and accessible anywhere. It also eliminates stigma surrounding hierarchical relationships between "users" and "experts".

Second, for educators, the specific contact with people with PIMDs in the Snoezelen context may have a favorable effect on their daily pedagogical contact. Situated within an

inclusionary framework, Snoezelen is largely a participant centered approach. The participant may choose to be involved, has input on the length of time spent, and largely controls the activities he or she engages in. Locating power and control in the hands of the participant, Snoezelen seeks to provide a reprieve from constraints. The participant is in the driver's seat, redistributing power, control and exploration back to those with PIMDs. This reprieve may reduce participant resistance to traditional approaches to therapy and learning at other times during the day.

Third, Snoezelen is especially suited to strengthening contacts between residents and staff in residential and vocational settings, and between educators and students in school settings. Although not exclusive to MSEs, there is a great deal more individual attention. With low ratios between staff and residents, MSEs provide a more intimate and interactive environment. The surroundings encourage the participants to explore and discover with their staff, on more equal terms. The participants have more control, if not complete control, of their surroundings, lending to a blurring of the power differential. This inevitably fosters trust and cohesion.

Fourth, Snoezelen may have beneficial effects on mutual trust, as staff and residents or educators and students experience new situations together. Through the act of exploration and discovery, the staff and participants share new experiences as a cohesive pair. This leads to celebrating successes and the positive promotion of new experiences. Learning and interacting in this manner continually recreates new "realities" for the participant to seek out and discover.

Fifth, by engaging in Snoezelen, staff may have more attention for 'snoezel' situations in everyday practice. Once a strong and supportive relationship is established with students, staff can establish a 'snoezel' mode of operation in any environment. For example,

by asking or directing key questions, all environments becomes prime for sensory

exploration and learning. From the feel of the breeze to the texture of grass, the world opens

up to reveal a plethora of sensorial experiences.

Sixth, Snoezelen encourages creative thinking through exploration, support, and

participant control and success. By allowing participant choice and agency, staff can

continually alter or assign tasks, encouraging the participant to seek out and explore. When

coupled with therapy or education, Snoezelen offers a wide range of activities in the

promotion of creative thinking and action.

Seventh, Snoezelen can offer a controlled environment through contingent and

noncontingent technologies (Bozic, 1997), such as tactile, olfactory and audio-visual stimuli

controlled by the participant and/or by a transdisciplinary team. This allows for the complete

control of experienced stimuli by the participant. As such, optimum perception and

experience are made possible.

Eighth, Snoezelen begins from a positive medium, providing each participant with

control over his or her environment. It allows for free exploration and "self-made" success. A

Snoezelen approach attempts to empower the participants through choice and causality in a

comfortable and supportive environment.

Located within an inclusive education paradigm, Snoezelen can offer practical tools

for calm and relaxation for all students. In an era of perpetual movement, sensorial breaks

and calm provide students with well needed rest throughout their day. Snoezelen begins from

a vantage of success and inclusion. Compatible with mindfulness and purposeful breathing

techniques, Snoezelen offers a grounded sensorial toolbox for refocusing, stress and anxiety

relief, and reestablishing a positive and calming equilibrium. Nevertheless, these approaches

should be participant driven and engaged in with care. Individual choice and voice play a

central role in calming and relaxation techniques. Snoezelen is one approach among many.

For textual reference, I have included the list of 'pros' by Hulsegge and Verheul

(1987).

- The visitors do not have to be accompanied by "specialist"; the staff themselves can do this. More than ever parents can be regarded as experts.
- The specific contact with [people with PIMDs] in Snoezelen may have a favorable effect on the daily pedagogic contact.
- Snoezelen is especially suited for strengthening the contact between participants and staff. In particular there is a great deal more individual attention.
- Snoezelen may have beneficial effect on mutual trust. Staff and residents experience new situations together.
- By going into Snoezelen staff may have more attention for 'snoezel' situations in everyday practice.
- Snoezelen encourages creative thinking and action.
- Snoezelen involves a selective offer of stimuli through which optimum perception and experience are made possible.
- Snoezelen more than anything else starts from the abilities of the [Intellectually disabled] instead of their inabilities.

The Cons of Snoezelen

There are at least three 'cons' of Snoezelen. First, Snoezelen as an original construct

lacks a solid theoretical and empirical basis. Although Snoezelen may fit within a larger

analysis of sensorial approaches, its foundational approach remains unique. Created to fill a

void, Hulsegge and Verheul established an innovative approach to learning, interaction and

empowerment that stood aloof from other programs or approaches in the 1980s.

Second, philosophical speculations about Snoezelen lack uniformity. As a grass roots invention, Snoezelen lacks clinical origins. Hulsegge and Verheul have attempted to recount, with precision, the evolution and philosophy of Snoezelen; and yet, it continues to be perpetuated in diversified ways. Moreover, due to various forms of meaning, construction and interpretation, some philosophical understandings may not be congruent with Hulsegge and Verheul original intentions.

Last, during the application of a Snoezelen session, users may be afforded additional freedoms not otherwise granted. This may in turn cause some confusion to both the user and staff. The user's confusion may surround the additional freedom granted, extrapolating these allowances to his or her wider environment. Depending upon the user, these context specific allowances may become corrected through repetition. On the other hand, staff confusion may be focused on the purpose of their additional freedoms and potential ramifications. Informative professional development, reading and mentorship may expel these doubts.

Again, for textual reference I have the list of "cons" developed by Hulsegge and Verheul (1987).

- Snoezelen lacks a solid theoretical basis.
- The philosophies about Snoezelen lack uniformity.
- During Snoezelen actions are allowed that are not tolerated in residential situations (playing with light switches, roaming about the room etc.) This dualism may be confusing for some residents (Hulsegge & Verheul, 1987, pg.125-127).

Joy and expressions of happiness play a considerable role in the process of being. Although a considerable asset to the repertoire of educative practices, the ideal of Snoezelen has not always fit such purposes. Nevertheless, Snoezelen can play a major role in experiential learning opportunities for all students.

Operational Definitions and Terms: Snoezelen versus MSE

Transformative push and pull factors have come to differentiate Snoezelen from MSEs. These two parts to a system, although currently disjointed, have been irrevocably tied since their inception. Snoezelen represented a philosophical and pedagogical framework for approaching sensory engagement. Its foundation lies in the essence of self-exploration, principally through users' choices. The word "Snoezelen" does not sound very scientific. It is a contraction of two Dutch words, the equivalents for English "sniffing" and "dozing", coined by two young men working at the recreation department of the Haarendael Institute in Holland. "Snoezelen" is an activity taking place in a dusky, attractively lit room where soft music is heard. There is an emphatic appeal to the senses (Hulsegge, & Verheul, 1987, pg.11). Snoezelen reflects an individual's autonomy by providing a wide range of options and control. Snoezelen exudes humanization, seeing those with exceptionalities (disabilities) as nothing less than fully human. Its spirit is openness and its functionality is the allowance of the participant's essential freedom. The application of Snoezelen was primarily, if not totally, confined to the realm of leisure and sensory exploration. By leisure, one envisions disconnect from educative purposes; those trivialities that one engages in after work. Nevertheless, since the 1970s, the realm of Canadian education has incorporated processes such as mindfulness, deep breathing and other practices traditionally "taught" or experienced outside of school. What was once conceptualized as extraneous from schooling has now begun to fall into a holistic conceptualization of education as encompassing the whole person; that is, not only learning "what to do" but also "how to be". As such, 'Snoezelen' has remained a pseudo-educative approach to sensory learning through self-directed, child [student]-led exploration (Bozic, 1997).

However, shortly following its initial bloom in popularity, corporate interest eventually led to the term 'Snoezelen' becoming a registered trademark. With that, Snoezelen® is now considered a registered trademark of Rompa, Chesterfield, England (Quality Palliative Care in Long Term, Retrieved November 14, 2017). A term that was once used to describe usage and a philosophical underpinning can no longer be used as such. As Mount and Cavet (2007) contend; in the UK, the word 'Snoezelen' is often used as a synonym for the term multi-sensory environment, although 'Snoezelen' has now become the registered trademark of one company which markets the environments and the associated equipment, and the use of the original Dutch term is restricted to that context (Mount & Cavet, 2007). Therefore, the term MSE now refers to a space that contains a variety of stimuli. In effect, MSEs have begun to take a radically different shape than originally proposed, becoming a generic term that can encompass therapeutic, educational and medical initiatives. The transformation, or rather splitting, of these terms has both constricted and opened up this area.

By divorcing 'Snoezelen' from the equation, MSEs became an open forum. MSEs could now be molded for targeted use in any area. While MSEs remained a space with preconceived notions (i.e. sensory engagement), they were without philosophical, pedagogical or even epistemological standing. A MSE is only governed by the imagination.

As aforementioned, the commercialized version of 'Snoezelen' provides a space with a specific reality it imposes on the participant. Snoezelen advances particular space configurations, approaches and material realities. Nevertheless, a space of free exploration through sensory engagement is still a restricted forum. It implies an objective freedom from external control while imposing a subverting controlling function, that being, the space itself. The application of a Snoezelen approach informed the participant's and observer's views, the

way they each thought about the experience, and how it was to be used. Moreover, the space limited sensory exploration due to its constricted capacity to hold a selected and delimited number of sensory tools. It also restricted the participant in its physical confines. Although there are no individuals prompting the participant, in this instance, the way the space is organized and conceptualized still restricts the user in a sense. This constraint, both ideologically and physically, was originally addressed by the creators of Snoezelen, Jan Hulsegge and Ad Verheul. The original idea of Snoezelen was to limit restrictions, allowing the philosophical underpinnings and ideology some fluidity with its focal point on leisure.

This re-conceptualization, with the removal of Snoezelen, has allowed the MSE concept to be appropriated by a variety of professions to fit their specific outcomes and objectives. The most common of these are in the area of education and medicine. Such environments are widely implemented in a range of services, particularly those for people with intellectual disabilities or dementia, including hospitals, hospices, leisure centers and schools. Carter and Stephenson (2012), for example, found that over half of the 36 schools responding to a survey of all government special schools serving children with severe intellectual disabilities in the state of New South Wales, Australia, reported that they provided MSEs (Hill et al. 2012). A rise in interest and popularity, coupled with expanding research into MSEs, as well as the advancement of the inclusion movement, set the stage for the entry of MSEs into schools. As a developing practice, MSEs have increasingly found their way into a variety of schools in different locales, with Manitoba being no different.

Immanent Critique and Genealogy

The application of a critical analysis, using an immanent critique (Antonio, 1981), allows for forethought on the subject prior to its analysis and deconstruction. To know how a system is to function, is to know its intent and its result. An immanent critique provides a

bird's eyes view, if you will, of a system. This allows the researcher (in this case) to see both how the system should function, its undesirables, and its potential shortcomings from its original conceptualization. As well, it conveys how the system is performing in actuality, what affect and effect it is producing. Thus, the researcher has a big picture to compare and contrast the actual with the intended, and to make appropriate recommendations as to how its inefficiencies should be corrected and improved. Furthermore, from the outset, one might discover byproducts, or collateral unintended consequences, that the system exudes, allowing for the development of preemptive strategies and or the anticipation of potential shortcomings.

Throughout this thesis, I used an immanent critique, seeking out appropriate eventualities for improvement through the isolation of deficiencies (Antonio, 1981). The application of the critique will be solely for the purpose of the illumination and betterment of the system in question. The immanent critique was actively applied to inform and ground my perspective, data analysis, and mind set. My application of this approach was a qualifying strategy and not overtly distinguished throughout. As such, throughout this thesis my operational definition is consistent with that of Robert J. Antonio (1981).

> … an immanent critique is a means of detecting the societal contradictions which offer the most determinate possibilities for emancipatory social change. The commentary on method cannot be separated from its historical application, since the content of immanent critique is the dialectic in history (Antonio, 1981, pg. 332).

In this study, this construct was applied to analyze MSEs in their current form, juxtaposing their intended use and how they are, in fact, being administered within Manitoba schools K-12.

In addition to the application of an immanent critique, a genealogy is applied.

A genealogy is a methodological process concerned with telling the story of how a set of discursive and non-discursive practices come into being and interact to form a set of political, economic, moral, cultural, and social institutions which define the limits of acceptable speaking, knowing, and acting. Genealogy uncovers the reciprocal constitution of discursive and non-discursive practices without privileging one over the other; it makes the study of the interaction of discursive and non-discursive practices and their role in the formulation of conduct methodologically feasible (Anaïs,2013, pg.125).

What distinguishes a genealogical approach from an immanent critique lies in the focal analysis of the historical. A specifically genealogical approach does not attend to grand historical and social formations (Sargiacomo, 2009) but to 'numberless beginnings', 'accidents', 'errors', 'false appraisals', and 'faulty calculations' (Foucault, 1977c, pp. 145–146). Foucault noted that one cannot understand a social phenomenon without analyzing the historical conditions that led to its development (Miró-Bonet, et al., 2013).

Genealogy pushes the boundaries of historical continuity, seeking to uncover the processes of historicization. Historicization being the attempt to treat or represent something as historical (Oxford Dictionary, 2017). Recognizing the inherent variance of history and its socially constructed framework allows for a relocation of thought and lens, when faced with a closed system of fact. Locating a multiplicity of 'truths', genealogy throws light on, and questions, the notion of a singularity in history.

The critical aspect of genealogy, that which sets it apart from other methodological approaches to the writing of history and the analysis of discourse, rests in its

disruption of the notion that our present modes of being are timeless, essential, and could not have been otherwise. It challenges the timeworn view that there is a singular version of events waiting to be uncovered by the astute social scientist or historian. It also troubles the idea that there is a logic to the flow of history that can once and for all be discovered and that the freedom to be our 'true' selves is one that we lack, or worse, one that we have been denied (Anaïs, 2013, pg. 134).

This process of historicization has all too often been used as a tool to subvert and itemize "truths", "realities" and experiences. In a Canadian, and a Manitoban context, we only need to look as far as our own backyard to see how this can take shape. First Nations Treaty decimation, ghettoization through reserves, and residential schools are but a few. How we perceive, and thus conceptualize history, in essence, produces our reality. Throughout this thesis, I use these conjoining tools to analyze one essential question: What are educators' perceptions of Multi-Sensory Environments in Manitoba schools (K-12)? These tools will inform my analysis of educators' conceptualization of: a) the history and philosophy of MSE spaces, b) the purposes and use of MSE space, c) the tools and provisions that comprise MSE spaces, d) training required to use MSE spaces, e) the role of inclusion in the MSE space, f) transparency in the use of MSE spaces, and g) collaboration with other educators in the use of MSE spaces.

Inclusive Conceptualization: Discourse on Method

How we, as human beings, view or perceive a thing, is a major contributing process to the formation of our reality. Reality is neither a fixed point, linear in all its degrees, nor a unified experience. Reality is shaped by each of us as individuals, located within a specific context, finally takes shape as we settle on an interpretation of our experience. This reality

may change over time, as our memory and socio-cultural myths become entangled. In this web of perceptual and conceptual indices, lies the formation of our reality.

An inclusive conceptualization seeks to provide a gateway to perceive and interpret information, experiences, and understanding in an inclusive manner. Moreover, it is also a lens in which to filter and apply informational or conceptual 'realities' in an open, welcoming and inclusive format. From thought to action, an inclusive conceptualization is both applied to the theoretical thought processes and to the physical world. Conceptualizing inclusivity will set the stage for both an intellectual and physical application of this ideal.

Throughout this thesis, I will apply an inclusive conceptualization as it directly and indirectly relates to MSEs. This conceptualization will follow a 'discourse on method' put forth by Carlo Emilio Gadda (Calvino & McLaughlin, 2014). Gadda's "system of systems" begins with the notion that every element in a system is in turn a system itself, that every single system is linked to a genealogy of systems, and that every change in an element implies the alteration of the entire system (Calvino & McLaughlin, 2014).

Furthermore, this approach also shatters the security of a single vision by way of synthesis of many perspectives (Bouchard, 2002). As such, the plethora of experiences, advances and challenges, systems, processes and substructures in education have a link to one another. These links reflect a multiplicity, enlarging to encompass greater ideals, systems, underpinnings and modes of operations.

Gadda's work is not symptomatic of a belated idealism, but challenges epistemological premises of a concordant structure by articulating an understanding of experience as the unfinalizable space that remains untamable despite models of rhetorical intelligibility. Bakhtin has termed this vision *nezavershennot.* Specifically,

this word suggests that nothing conclusive has yet taken place in the world, that the

ultimate word about the world has not been spoken, that the world is open and free,

that everything is still in the future and will always be in the future (Bouchard, 2000,

pg. 277).

Gadda's work, *Meditazione* (1986) seeks to give a philosophical underpinning to the

notion of reality as a space of complexity and temporality that is irreducible to structures of

opposition and finality. This philosophical conception engenders a discourse of open-ended

inclusion (Bouchard, 2000). These links perpetuate themselves, evolve, become complex and

sets the stage for future development. Through this historical process, education becomes

reality and takes shape as the present as a result of various events. This educational

evolution, in part, provides a starting point for Gadda's "system of systems".

Carlo Emilio Gadda tried all his life to represent the world as a tangle or jumble or

ball of yarn, to represent it without in any way diminishing the essential complexity

of it or, to put it better, the simultaneous presence in it of very disparate elements that

converge to determine each event (Calvino & Brock, 2016).

Gadda's ideal proceeds from a detailed oriented genealogical motif, with a focus on

the historical as a systematic, yet seemingly disjointed, complex structure. To provide a small

crumb of tangibility…

…like Gadda's kaleidoscopic subjectivity, characters cannot be defined according to

the antithetical-and therefore unambiguous-attributes of "a,b,c" but are open to

permutation and change of roles. In Gadda's words, characters are becoming "a, e, b"

and are revealing their nature as "omnipotenziali", that is to say, capable of straddling

a multiplicity of positions (Bouchard, 2000, pg. 279).

Gadda's system seeks to explore and expose flux, change and contradiction. Gadda's characters becoming "a, e, b", expose the nonlinearity of systems, information, history and literature. Understood as a syntactic expression, "a, e, b" conveys a reordering of traditional ways of understanding. Moreover, "a, e, b" understood as a symbol or sign (semiotic), can covey Gadda's "system of systems" idea in itself. Both as a system or an individual, "a, e, b" symbolizes nontraditional means of knowledge, expression and exploration as viable sources of information and conceptualization.

Systems and people are very much the same. We inhabit a set space and time while simultaneously personifying and living within flux. Recognition of multiplicity and complexity is paramount. Gadda notes that a tangled, complex model of representation would better translate the processes of transformations and combinations that make up the chaos of reality (Bouchard, 2000). Furthermore, what is stressed is the connection between experiences, events, systems and structures, despite their seemingly disparate association. To tell it as Robert Dombroski (1994) does; for Gadda, knowledge is a becoming in the Bergsonian sense of duration. That is, a continuous enlarging of experience or, simply stated, a process (Bouchard, 2000).

Gadda's "system of systems" lens will compliment both an immanent critique and genealogy by allowing me to explore past conceptualizations of MSEs, as well will afford me the structure to put forth an inclusive conceptualization. Gadda's discourse discloses a vision of life as a space of complexity but also of endless possibilities and transformations (Bouchard, 2000). With an affinity for detail and connection, Gadda will allow for a macro and micro dialogue on the nature, structures and conceptualizations of MSEs in an inclusive context. This conscious approach provides a lens for the exploration of 'interconnectivity' when making connections to educational thought and practice.

The Case for Inclusion in a Manitoba Context

What is inclusion? Inclusive education is a foundational building block in the 21st century Canadian education system. Officially, the Manitoban inclusive movement began in 1966 when legislation was enacted that ensured the rights of individuals with intellectual disabilities to access publicly funded education. Up until 1975, children with a variety of exceptionalities (disabilities) were educated in separate classes or schools by specialized professionals. In 1975, laws were passed for the integration of 'special' students into regular classrooms. At various points throughout the 1980s, these laws were reaffirmed and reinforced. Integration during this period was primarily of the 'mainstreaming' genre, aiming to have students with a variety of exceptionalities (disabilities) adapt to regular classroom settings, rather than adapting regular classrooms to the needs of students with disabilities. It was not until the 1990s that inclusion began to be widely advocated as an alternative to mainstreaming. During the latter part of the 1990s, the inclusion movement grew in popularity and gained provincial support. By the mid-2000s, a law on access to 'appropriate education' was passed, along with a set of guiding principles to ensure a certain degree of consistency in terms of its application and interpretation (Bélanger & Gougeon, 2009, pg. 294).

Inclusive education has emerged as a defining characteristic of Canadian education.

Inclusive education and 'education for all' have become the mantra of educational policies at many levels in Canada today, a country where education falls under provincial jurisdiction.[1] School boards, associations, as well as parent and other groups, have made inclusive education a top priority. Accordingly, educational actors

or practitioners incorporate inclusive policies into their discourses and practices, and use them to put forward contextualized meanings of their notion of inclusion (Bélanger & Gougeon, 2009, pg. 294).

There remains a variety of definitions, and thus conceptualizations of inclusion. The inclusion paradigm itself takes on different meanings depending on the people and contexts in which it occurs. Although Anderson-Levitt (2005) did find that there is a more uniform experience of schooling and socialization around the globe than in the past, she nonetheless maintains that (Bélanger & Gougeon, 2009)…

…national and local cultures are so powerful that many ethnographers argue that schools are not really alike at all around the world, whatever superficial parallels one may find in their official organization or official curricula. There are also differences from one school to another school in the same country, from one classroom to another within the same school, and even from one class to another when holding the teacher constant. (p. 993) (Bélanger & Gougeon, 2009, pg. 291, as cited in Anderson-Levitt, 2005, p, 993)

Following an epistemological posture, Benjamin, Nind, Hall, Collins and Sheehy (2003) contend:

Inclusion is not a target to be hit, or a goal to be reached; nor is it the final destination of a road of continuous linear improvement. Rather, inclusion is an ongoing process: marked out by struggle and negotiation, and worked out through interpersonal actions and relations in a wider social and political context. (2003, p. 556) (Bélanger & Gougeon, 2009, pg. 291)

For this thesis, I used Moran's (2007) definition, which describes inclusive education as the entitlement of all children and young people to quality education, irrespective of their differences, dispositions or disabilities. It is about embracing educational values of equity, diversity and social justice (Reimer, 2010). In addition, my referral to an inclusive paradigm and its application does reflect the amendment to the Public Education Act in 2004/05 that lead to the development of the Appropriate Education Programming regulations (Inclusive Education in Manitoba A Review of Progress Toward Appropriate Education for All. Global Conference on Inclusive Education University of Salamanca Salamanca, Spain October 21 to 23, 2009). This amendment led to the current ideal of inclusion, in a Manitoba context, and is congruent with Moran's (2007) definition of inclusion.

In congruence with Moran's (2007) definition of inclusion:

Manitoba Education and Advanced Learning is committed to fostering inclusion for all people. Manitoba's philosophy of inclusion reflects a commitment to providing all students with appropriate educational programming that supports their participation in both the academic and social life of schools. In a safe and inclusive learning environment, the concept of diversity encompasses acceptance of and respect for each other (Supporting inclusive schools: a handbook for resource teachers in Manitoba schools, 2014, pg. 3).

From this perspective, when all students and citizens recognize, and indeed celebrate, diversity as new gifts brought by the multitude (Freeze, 2017), society inherently benefits. Canadian society is thus infused with new and invigorating perspectives, insights and lifestyles. In Canada, one source of national strength resides in the multicultural and open societal goal of inclusion. When all Canadians accept, and build around their unique

qualities; all begin to recognize we have more in common, than not. It is this common recognition that which builds strong and resilient citizenship and allows all Canadians to strive toward the recognition of their inherent dignity and of the equal and inalienable rights of all members of the human family. It is the foundation of freedom, justice and peace in the world (Universal Declaration of Human Rights, 2017). In Manitoba….

> …..all students are valued members of the learning community. This means understanding that each individual is unique, and recognizing individual differences. The dimensions of diversity in classrooms include, but are not limited to, physical and intellectual abilities, culture, religion, socio-economic status, sexual orientation, race, and language. (Supporting inclusive schools: a handbook for resource teachers in Manitoba schools, 2014, pg.3)

Manitoba Education and Training Philosophy of Inclusion

Manitoba Education and Training, as the governing board of education in the province of Manitoba regulates, monitors, problem solves and sets standards for education. Inclusionary endeavors have been an area of focus for this governing body for a number of years. Inclusion, as a singular notion lends itself to a gamut of interpretations. As such, Manitoba Education and Training has produced a philosophical mantra to both guide and inform discussion.

> Manitoba's Philosophy of Inclusion specifically contends; The Public Schools Acts supports Manitoba's philosophy of inclusion, which states: Inclusion is a way of thinking and acting that allows every individual to feel accepted, valued, and safe. An inclusive community consciously evolves to meet the changing needs of its members. Through recognition and support, an inclusive community provides meaningful involvement and equal access to the benefits of citizenship. In Manitoba we embrace

inclusion as a means of enhancing the well-being of every member of the community. By working together, we strengthen our capacity to provide the foundation for a richer future for all of us (Education and Training. (n.d.). Retrieved November 14, 2017).

Providing background and direction, Manitoba Education and Training sets the groundwork for school discussion and planning. Coupled with a philosophical statement, this governing body offers clinician consultation and supporting documentation for implementing inclusive education in Manitoba schools. Nevertheless, there continues to remain some limitations to inclusion. These limitations are expressed in a variety of ways, including various "interpretations" of the meaning and extent of inclusion, inadequate school and divisional resources, a lack of administrator and teacher education and professional development and the multiple aspects that comprise inclusion, such as physical, social and academic inclusion. Despite policy enactments and documentation, inclusion continues to be a subject of debate and uneven implementation.

What does Inclusion Mean to a Student with Special Learning Needs?

The inclusive paradigm, as a continual process, provides a multifaceted conceptualization that affords students with disabilities, both physically and intellectually, the opportunity to participate in, and contribute to, general educational settings. Even when a student with a disability is initially situated in a special education class, an inclusive framework allows for the infusion of that student into a general education classroom. Educational policy in Manitoba suggests that the default for all students is in a general education classroom. Nevertheless, the extent to which a student with a disabilities partakes of a general educational class depends on a variety of factors. These factors vary depending upon context and lived experience. Nevertheless, a student with a disabilities can, and

should, be included "to the maximum extent appropriate" (Antoinette, 2003). Meaning, a student should experience a meaningful sense of inclusion to the fullest extent of their ability. As Manitoba Education and Training contends:

> Students with special needs should experience school as much as possible like their peers without special needs. To make inclusion applicable in Manitoba schools, educators will: Foster school and classroom communities where all students, including those with diverse needs and abilities, have a sense of personal belonging and achievement. Engage in practices that allow students with a wide range of learning needs to be taught together effectively and enhance students' abilities to deal with diversity (Manitoba Education and Training, http://www.edu.gov.mb.ca/k12/specedu/aep/inclusion.html, 2017).

While this process may look different in every school, it is all part of inclusion.

Conceptualizing an educational paradigm that includes all is foundational to a progressive and open educational system. The role of education is no less than the process of shaping society and the nation; with its affinities, norms and modes of operation. Affording students with special needs places within all educational programs is an act of equality, one that should be celebrated to its fullest extent.

Proponents of Inclusion: The Inclusion Spectrum

As aforementioned, the notion of inclusion encompasses various meanings. To a large extent, inclusion is a spectrum that retains the functional dynamics of a process. It is something to continually work towards, with the understanding that perfect adherence to inclusion is a utopian notion. Proponents of inclusion, like inclusion itself, reside within different ideological camps. Advocates of full inclusion want to see the elimination of special education. They argue that special education is morally and educationally wrong, because

grouping based on ability damages (Antoinette, 2003) students' opportunities and outcomes.

As Ruppar (2013) contends, research has demonstrated that students are more likely to be

engaged in learning the general education curriculum in general education classrooms than in

special education classrooms (Ruppar, 2013). Locating the focal point of special education

within a constructivist modality, advocates of full inclusion argue special education is a

segregationist practice based on perceived differences. As a result, stigma and degradation

remain pervasive, while students receive little to no benefit within the special education

paradigm.

Alternatively, there remains proponents of inclusion who see value in special

education. They contend that providing supportive and safe environments that allow students

with disabilities to explore, create and learn various skills that are not taught, in the same way

and to the same extent, in a general or "mainstream" classroom adds value to their

educational experiences. Providing a uniform education, as if all students fit a common mold,

lacks insight in functionality, even with the application of differentiated instruction.

Inclusion itself is a word that involves interpretation and negotiation within its lived

context (Belanger & Gougeon, 2009). Inclusivity will provide students with a variety of

participatory and experiential learning endeavors. Multiplicity is, in fact, vital to the

educational and democratic experience. Seeking to differentiate is indeed the most inclusive

practice of all. Do we not allow students of general education to take a variety of classes,

across curricular lines and subject matter that are delivered in a variety of venues and at

different academic levels? Are students of general education afforded the opportunity to

explore within these confines and establish proficiency in a variety of areas? And, are they

not celebrated when, through this process, individuals discover their passions and talents?

Inclusive practices seek to provide the best educational opportunity for student success.

Inclusion is in part understood as being a process that takes into consideration the diverse needs of the learner in order to maximize his or her participation in the learning process, the school and community social and cultural lives, and to reduce the number of learners exclude from the school or with the school itself. According to Ainscow, the inclusion movement is defined by the notion of a school in movement that implies, among other things, using existing practices and knowledge as starting points for development, as well as seeing difference as learning opportunities rather than a problem to be fixed, and trying to remove barriers that prevent students from participation in schools (Bélanger & Gougeon, 2009, pg. 290).

While the breadth and depth of this process will vary, the crux of this process is the betterment of students. As Belanger and Gougeon (2009) assert, in a lived context, inclusion is about more than applying formulas; it is about the recognition of difference as opportunity and movement towards the removal of barriers to full participation, as well as recognition of similarities between children and students (Bélanger & Gougeon, 2009).

Opposition to Inclusion

Opponents of inclusion propose a variety of lines of argumentation, questioning: a) the educational benefits of inclusion, b) the non-academic, social benefits of inclusion, c) the financial cost of inclusion (for example, supplemental aides and services), and d) the effects of students with exceptionalities (disabilities) have on the teacher and non-disabled students in the classroom (Antoinette, 2003). Finally, opponents of inclusive education seek to question teacher effectiveness, training and knowledge as it pertains to education and engaging students with exceptionalities (disabilities). A cursory reading seems to illustrate sound logic; nevertheless, my discussion will illuminate the fault embedded within these modes of perceiving and thinking. My discussion will center primarily on the way in which

educators' conceptualize education, students with exceptionalities (disabilities) and societal composition.

Questioning the Educational and Social Benefits of Inclusion

As previously discussed, our perception constructs our realities. Experience, sensory systems, cognitive processes and modes of perceiving (the lenses we interpret information through) focus information to enable us to survive and thrive. Each individual is unique. Our individual uniqueness lies in the myriad differences that make up each self. However, people also come together to comprise a whole, or society. Being a conglomerate of individuals comprising a whole allows for varied approaches, ideals and successes, with each contributing in different areas and in a variety of ways. In this context, it makes sense to adopt an inclusive conceptualization of education, allowing everyone, regardless of perceived difference, to engage and contribute to our societal composition. To exclude signals a process of deconstruction of the individual based on their uniqueness and difference, and thus an erosion of our societal make-up. The same is true in education.

Education shapes and molds nations, builds societies and allocates priorities. Inclusive education allows for a process of learning, where difference is tertiary, and common goals, dreams and pursuits emerge. As a microcosm, inclusive education allows each individual the advantage of being perceived based on human "potential", rather than wasting time on detrimental "deficit" perceptions. By constructing and continuously pursuing inclusive education, educators transform society over time, enabling a greater cohesion among all those who make up its compositional realities.

Antoinette (2003) puts forth the idea of equality over efficacy. With this, she contends that a student with disabilities may be embarrassed by the special treatment he or

she gets. At the same time, these accommodations may reinforce the general students' perception that disabled students are inferior. Consequently, opponents of inclusion maintain that if students feel discouraged or insecure due to class diversification, then inclusion is helping no one and the negative stigma associated with disability is perpetuated tenfold (Antoinette, 2003). Antoinette (2003) has speculated on third party beliefs and the potential outcomes of inclusion, referring to them as oversimplified and utopian (Antoinette, 2003). It is not until the conclusion, that Antoinette (2003) proposes an option to resolve the pros and cons of inclusion. This solution is entitled "Three Strikes and You Are Out":

> …..under the system, a complaining student, her parent, or even a general teacher, may petition the school to remove a disabled child from the general classroom for disruptive behavior if, on three occasions, the child's outbursts cause the teacher to discontinue teaching, create an environment in which concentration is impossible, or in some way harms the other students in the class. Put simply, the Three Strikes system defines the threshold for when a disabled student becomes so disruptive that his or her inclusion in the general classroom is inappropriate (Antoinette, 2003, pg. 2057).

This proposed solution is symptomatic of exclusionary rhetoric, or potential policy, based on difference. If the same approach is not being applied to all, then its aim is to single out a potential threat, which is exactly how those with disabilities, in this context, are categorized. With an air of eugenic philosophy, this idea is a symptom of the past. Nevertheless, from this vantage one can both appreciate an atmosphere of inclusion, that being the opposite of the aforementioned, and continue to see progressive thought over disintegrative ideals. Opponents of inclusion provide a clear and concise juxtaposition for analysis. Despite the aforementioned, there continues to remain areas of inclusion, embedded

within this category, which can be constructively criticized. These areas reside in a lived context or situation. Areas that require further adaptation lie within the bureaucratic network of design. By using inclusion as a process or framework, one that continues to expand, grow and change, altering pre-established processes, procedures and contextualization remains vital. As such, inclusion does not stand aloof from considerable appraisal, but it certainly bypasses argumentation for segregation, both academically and socially.

Financial Cost of Inclusion and the Effects the Disabled Student Has on the Teacher and Non-Disabled Students

When considering the educative endeavor, a person should not make comparisons and contrasts to the business arena. By shaping the educational landscape with productivity as the primary criteria, a person will quickly realize that education simply does not abide within a simple "input-output" model. If so, all schools would simply have auditoriums filled with students who were lectured to by a singular individual and then sent on their way to complete various assignments and readings. Failing students would be "fired" (segregated) or "retained" in entry level positions (grades), and successful students would be "promoted". A business approach to educational pedagogy inevitably leads to an elitist process of selection and deselection, not unlike the educational system used to divide and conquer colonized peoples.

However, in Canada, education at the elementary through high school level is comprised of unique individuals applying tools and creativity while exploring key issues, concepts and ideals. The goal is to create an educated and cohesive society grounded in human rights, not an oppressed majority governed by a selected elite. Although economics play a managerial role in education, conceptualizing education in a business fashion would alter the very fabric of our institutions. It is for this reason that speaking about increase cost

of inclusion is pedantic. Operating under a strict budget, schools allocate and reassess

resources to areas of need while maintaining their course. Inclusion is a systematic alteration

that provides the optimal level of belonging amongst fellow students. Through cohesive

classrooms and supported communities, all students feel welcome and are provided a

comprehensive and sound education.

Teacher Training in Inclusive Education

One of the most prevalent factors identified in research as being key to teacher

acceptance of inclusion-based practices is pre-service training. Snyder (1983) and Blair

(1999) have concluded that a more aggressive approach to preparing the general education

teachers is necessary, in addition to arming them with more information regarding how to

include children and adults with special needs in the classroom (Wilkins & Nietfeld, 2004).

Currently, there are very few educational training opportunities offered as part of Bachelor of

Education programs in Canada. Although minimal information may be presented, the

limitations of undergraduate preparation in this area are serious. In Manitoba, information

and training in inclusive education is seen primarily as a post-degree endeavor. As Dias

(2015) affirms, research results seem to support that teachers have positive attitudes toward

inclusion, recognizing the benefits for all students, and understand the importance of

collaboration between general and special education teachers. However, the studies seem to

reinforce the crucial role of professional variables, especially professional development

(Dias, 2015).

MSEs in Manitoba schools must be spaces conceptualized for all students. With

inclusion as a main driving factor for educational and societal development in Canada, MSEs

must be used and approached as spaces open for variety of uses, including photography,

mathematics, physics to yoga, mindfulness, mental health and sensory exploration. Inclusion

must inform the planning process and implementation of MSEs. To conceptualize the MSE as a space exclusively for individuals with PIMDs is akin to exclusion, segregation and marginalization.

Research has shown teachers need support, additional training, common planning with special education/student service teachers, and staff development that is ongoing (Wilkins & Nietfeld, 2004). As discussed, it seems apparent that further educational qualifications, course options and an increase in professional development, both pre- and post- degree, are essential to the further development of inclusive education in Manitoba and Canada.

Throughout this chapter, using the analytical methods of an immanent critique and genealogy, I have explored the historical development and theory of Snoezelen (1960-present), presented operational definitions and terms (Snoezelen vs. MSE), introduced an inclusive conceptualization (discourse on method), and discussed the case for inclusion in Manitoba. This chapter has provided the main framework for a thorough discussion and analysis of the field of MSEs and inclusive education. In Chapter Two, I will build upon these concepts as I explore: a) the current literature on MSEs and sensory learning, b) the absence of unified policies, procedures, and budgetary guidelines with respect to MSEs, c) conceptualizations of space and the limited philosophical understanding of Snoezelen, and d) the significance of present support service delivery models, educational thinking on disability and assessment, and other current implications in the implementation of MSEs. The discussion and research methodology is outlined in Chapter Three. The findings are presented and discussed in Chapter Four, and the implications, limitations, recommendations and conclusions are presented in Chapter Five.

Chapter Two

Literature Review

Throughout my literature review chapter, I explore a variety of foundational studies in the field of MSEs. These studies provide a snapshot of the current literature on MSEs as it pertains to the field of education. These studies vary by number of participants and design. They are representative of the current literature.

Throughout my review, I selected studies that both related, directly or indirectly, to the field of education and were seminal articles in the field of MSEs/Snoezelen. They are organized under three headings: a) review of literature, b) studies/experiments and c) conceptualization or concept exploration. These studies ranged in date between 1995 and 2014 due to their relevance, and form the backdrop for my study.

Many studies and articles are currently published about MSEs and Snoezelen, but not in an educational context. MSEs and Snoezelen have become very popular in a variety of fields, including geriatrics, hospice care, and the treatment of dementia and brain trauma. An emerging field in this area is virtual MSEs, particularly for those who are visually impaired. Although this technology may advance MSEs in the future, it is currently inaccessible to, or not widely used in, education. Cursory information from these areas have been gleaned and used in my thesis, nevertheless they form an important background.

Themes that emerged from the selected literature included, but are not limited to: a) a lack of empirical evidence in the use of MSEs, b) absence of unified policies or procedures governing MSEs, c) a lack of budgetary guidelines, d) inconsistent conceptualizations of space and use, e) limited philosophical understanding of Snoezelen, f) a lack of evidence for long-term skill attainment and skill generalization, and g) a lack of studies that explore MSEs and Snoezelen in the field of inclusive education.

Manitoba schools advertise that they are currently promoting the continual practice of inclusion for all students. With the presence of MSEs in Manitoba schools, I sought to answer one main question;

What are educators' perceived effects of Multi-Sensory Environments in Manitoba schools (K-12)?

Through this question, I sought to inquire into varying aspects of educators' perceptions of MSEs, including, but not limited to, educators' conceptualization of: a) the history and philosophy of MSE spaces, b) the purposes and use of MSE space, c) the tools and provisions that comprise MSE spaces, d) training required to use MSE spaces, e) the role of inclusion in the MSE space, f) transparency in the use of MSE spaces, and g) collaboration with other educators in the use of MSE spaces.

Forming the foundation of my study, this literature review explores the varying aspects, conceptualizations, and uses of MSEs in the field of education, or those closely related. Through the analysis of these studies, the progressive evolution of sensory learning and MSEs is explored.

Brief Historical Background of Sensory Learning in Education

The process of sensory awareness and exploration in education has been an arduous journey for over 200 years. A progression, beginning with Johann Jakob Guggenbuhl (1816-1863), Jean-Marc-Gaspard Itard (c. 1800s), and Edouard Seguin (1812-1880) and continuing through to Maria Montessori (1870-1952) (Hanes, Brown, & Hansen, 2018) and Jan Hulsegge and Ad Verheul (mid1970s) (Hulsegge, & Verheul, 1987, pg. 19) has marked a transitional process of sensory awareness within the educational paradigm. Collectively, these individuals have largely shaped the way in which educators and therapists

conceptualize, relate to, and interact within the realm of sensory needs and their application in learning. As Chalmers, Debattista and Ramic-Brkic (2009) contend, our perception of an environment is not only what we see, but may be significantly influenced by other sensory inputs, including sound, smell, feel, and even taste (Chalmers et al., 2009). This historical movement produced evolutionary models that radically impacted the hierarchy and levels of education in a bottom-up trajectory.

Review of Literature

Maria Montessori altered the way in which we view the role and purpose of the pupil located within the educational environment (Hanes et al., 2018). Recognizing the environment as a vital factor allowed for more authentic interactions within education. Montessori education is characterized by multi-age classrooms, a special set of educational materials, student chosen work in long time blocks, collaboration, the absence of grades and tests, and individual and small group instruction in both academic and social skills (*Innovative Learning Environments*. 2013, pg. 20). This restructuring process, now known as the Montessori approach, laid the groundwork for advanced sensory exploration and experimentation.

Perceptibly, this led to a broader conceptualization of sensory scholarship. From vestibular stimulation, the Feldenkrais approach and various other forms of therapy, sensorial approaches and knowledge expanded. During the late 1970s, two Dutch therapists, Jan Hulsegge and Ad Verheul, experimented with a sensory tent at the De Hartenburg Institute. The goal was to increase enjoyment and sensory experience for those with intellectual disabilities. The term, Snoezelen, which is a contraction of the Dutch verbs "snuffelen" (to seek and explore) and "doezelen" (to relax) gave birth to our modern conception of sensory awareness/tools (Snoezelen Theory/Multi-Sensory Environments) and insights (Fava &

Strauss, 2010). The original MSE concept was bound within a framework of leisure and failure free activities. However, with its development into other clinical areas (pain management, geriatric and related services, etc.) therapists have started to use MSEs as an intervention with therapeutic goals (Pagliano, 1999, pg. 7). As Pagliano (1998) asserts:

> The open-minded MSE is: "A living environment" where there is a dynamic balance between constancy and change, where the environment is determined by the needs of the user and shaped by the intelligence and sensitivity of the trans disciplinary team that manage it. This new MSE is a dedicated space or room for relaxation and/or work, where stimulation can be controlled, manipulated, intensified, reduced, presented in isolation or combination, packaged for active or passive interaction, and temporally matched to fit the perceived motivation, interests, leisure, relaxation, therapeutic and/or educational needs of the user. It can take a variety of physical, psychological and sociological forms. (Pagliano,1998, pg. 107)

MSEs continues to evolve and take shape as a progressive technique, largely conceptualized as a space by those that govern its use. Approaching MSEs contains a certain level of fluidity and interpretation on its multiple possible functions. The space, as Pagliano (1998) contends, can be used to open up new and exciting worlds, breech impasses and melt that which seemed solid (Pagliano, 1998). Cavet (2007) questions if such an environment is in keeping with the philosophy of normalization. She questions whether a multisensory environment using artificially manufactured lighting, olfactory stimulants and so on, is more beneficial to the client than the light from a natural fire, the smell of flowers in the garden or of freshly prepared food (Mount & Cavet, 2007). In essence, can the conceptualization of a free space, aimed at sensory regulatory exertions and exploratory endeavors be a substitute for life experiences? In a similar vein, although with some avant-garde posturing, Whittaker

(1992) comments on the exceedingly high cost of multisensory environments and suggests it is an activity that encourages those with exceptionalities (disabilities) to be segregated rather than to integrate through participation in similar activities with other members of society. Whittaker (1992) also states that Snoezelen may well be acceptable at the seaside or at an Easter Fair, but suggests that it camouflages the real issue, which has more to do with the denial of human rights (Mount & Cavet, 2007). Without exception, perception in the real world is multi-sensory (Chalmers et al., 2009); feeling the breeze or smelling the crisp summer eve cannot be substituted, nor should they be. MSEs do not seek to replace reality, but rather offer an alternative within a setting when naturalistic environments might not be possible or readily available. How the environment is conceptualized and perceived begets its function.

Finally, sceptics of MSEs maintain that limited impact, sparse research and circumscribed effect leave the subject wanting. Within the annals of literature on MSEs, which are admittedly rather sparse, especially in the field of education, looms an internal debate between quantitative and qualitative research. Despite structural limitations, the studies below comprise a foundational discourse of enduring importance.

Studies/Experiments

The Use of Multisensory Environments in Schools for Students with Severe Disabilities: Perceptions from Teachers by Stephenson and Carter (2011) gives the literature on MSEs a weighted response, namely the supremacy of empirical studies. The study was designed with two converging parts; in depth interviews with school staff and in-depth interviews with teachers currently using MSEs (Stephenson & Carter, 2011). The subjects of the study were from two schools in Sydney, New South Wales (NSW), Australia. The researchers explored the background to the installation of the MSEs and perceptions and

beliefs about the effects of the use of MSEs (Stephenson & Carter, 2011). The interviews included both open ended questions to elicit the history of, and rationale for installing a MSE, how the school found out about MSEs, whether or not the school staff had read any research on MSEs, overall use of the MSE, whether and how the MSE was used for leisure, assessment and or teaching, what specific equipment was installed, and the perceived benefit of both the MSE and specific pieces of equipment (Stephenson & Carter, 2011).

The instrumentation and reliability of the study is multifaceted and strong, allowing for the researchers to collect significant data. Unfortunately, the researchers fuse their findings with a formidable sense of bias, propagating a direct and consistent line from hypothesis to conclusion. The study leaves no mention of social and or cultural *milieus* that could have affected, contribute to, or swayed the researchers or participants.

The importance of their study, and thus its shining contribution to the field, was that the authors presented two important areas of concern. First, the lack of educators' knowledge of MSEs, including the background, philosophy and underpinnings of the approach. As well, the study highlighted the subjects' lack of awareness of existing research in the field and the research deficit into MSEs. Participants at the two schools did not report any awareness of the literature on MSEs. Nor did they express reservations about their use of a method lacking empirical support. Both schools seem to have depended on suppliers of equipment for information about MSEs, and used catalogues, salespeople and internet sites to find out about MSEs (Stephenson & Carter, 2011).

Second, Stephenson and Carter (2011) suggest a lack of transfer of skills and benefits from the MSE to the 'real world'. Furthermore, the authors suggest long term and short-term benefits of MSEs are limited. With these findings, Stephenson and Carter (2011) expressed a concerned reservation toward the implementation of MSEs in educational settings.

Nevertheless, they concede that "given the history of MSEs, it may not be unreasonable to assume that they will continue to be used and possibly expanded in school settings" (Stephenson & Carter, 2011). With this, the authors recommend updated policies and procedures, staff professional development, assessment strategies, informed information and guidance for schools and continued research in this area.

These issues are pertinent in the area of educator's perceptions of MSEs (Stephenson & Carter, 2011). These aspects govern the potential credibility of MSEs in educational settings with reservations due to the lack of empirical support. Coupled with inclusive education, this study provides a strong basis for continued exploration and research within this area.

Constructing the room: multi-sensory rooms in educational contexts by Nick Bozic (1997) fills in the social and cultural gaps the previous study left out, by presenting research specifically designed to expose this substantial area. As Bozic contends:

The value of the analysis lies more in highlighting some of the different social constructions that are possible vis-a-vis the use of multi-sensory rooms in schools. The educational use of these rooms is not self-evident. It is constructed by the staff who use them, and in varying ways. Nevertheless, these differing constructions can be understood as drawing their linguistic raw materials from two basic and qualitatively distinct interpretative repertoires. Furthermore, it would seem that elements of the child-led repertoire do resemble the language that was originally used to describe the use of multi-sensory rooms with adults in institutions for people with mental disabilities. However, in school contexts this repertoire is used in conjunction with the distinctive developmental repertoire and creates a range of different social effects. (Bozic, 1997, pg. 68)

Bozic contributes a wonderfully in-depth qualitative study that contains a plethora of information. For the field, this study provides valuable social avenues of information coupled with the importance of space conceptualization. The study delves into linguistic resources and practices (discourse analysis) and explores how to define, create and use MSEs. Weaving social ideals into his analysis, the Bozic highlights various purposes MSEs can play within a given setting. These were explored within his analysis using two distinct 'repertoires'. First, the child-led repertoire and second, the developmental repertoire. The child-led repertoire…

….shares many characteristics with the initial adult-oriented use of multi-sensory rooms. The room is presented as a comfortable, relaxing place in which children are able to make their own decisions about the activities they become involved in. Use of the room is associated with fun and enjoyment. (Bozic, 1997, pg. 57)

Bozic's child-lead repertoire engages participants through curiosity, exploration and choice. In line with a Snoezelen approach, Bozic expresses an affinity for this approach, allowing the participant the freedom of learning through free exploration. In contrast, the developmental repertoire…

…..could not readily be combined with the language of child-led repertoire and could not readily be combined with the language of child decision making and relaxation. Instead it focused on a developmental view of the child progressing through stages and levels. The teacher was depicted as the guiding influence over this progression….Multi-sensory rooms were seen as stimulating, motivating places, in which children actively concentrated and worked (Bozic, 1997, pg. 57).

The developmental repertoire represents a direct curricular focus. Emphasis was placed on words like "concentration", "in control" and "distraction-free" (Bozic, 1997). Bozic explores how this conceptualization alters the use and purpose of the MSE space. These two repertories are relevant to the exploration of the various permutations of MSEs.

Using a semi-structured interviewing technique, Bozic (1997) exposes a transformative world created by our expressive use of language. The various sources of information gathered and applied to Bozic's (1997) study provides a multi-layered continuity to his research and analysis. This practice of seeking various informational paradigms from across subjects, disciplines and traditional sources is one I aspire to capture through my discourse on method. Bozic's (1997) authenticity, instrumentation and sampling were progressive and thorough. Context insensitivity and weak participant perspectives were nonexistent, and his research bias was minimal. This study exposes the importance of how MSEs are conceptualized and their functionality in the field of education.

The *Effects of Multisensory Environments on Stereotyped Behaviours Assessed as Maintained by Automatic Reinforcement* by Hill, Trusler, Furniss and Lancioni (2012) is a study exploring and evaluating the effects of the sensory equipment provided in an MSE (Hill et al., 2012). Although poignant, this study looked at two individuals, thus potentially leaving their sampling significance largely lacking. The first participant was a 14-year old girl with a diagnosis of autism and severe intellectual disabilities who exhibited high rates of stereotypical behavior (body jerking, hand flapping and mouthing of objects). The second participant was an 18-year old man with a diagnosis of autism and severe intellectual disabilities, who exhibited high rates of stereotypical behavior (Hill et al. 2012).

Both participants attended a residential school with an MSE with padded walls and floor and containing equipment including mirror balls, lights, music and bubble tubes (Hill et al. 2012). This study compared the MSE to a living room setting, observing frequency of participant stereotyped behavior in each setting. The study used a wide variety of sources to buttress their experiment and findings, but again displayed significant bias in that they established a convenient hypothesis to conclusion framework.

Context insensitivity and a lack of reliability were largely at play, as the participants were chosen because of their previous fondness of MSEs. This suggests that this study showed many of the same manipulations as the Stephenson and Carter (2011) study, just in reverse. By presupposing findings, the authors contribute to the circular trend of MSE research.

Multi-sensory environments: an exploration of their potential for young people with profound and multiple learning difficulties by Mount and Cavet (1995) is a qualitative analysis of research but lends a great deal of importance in the prescriptions it brings forth in questioning MSEs. Not unlike the previous research, this study systematically imparts a lens of critique to both sides of the argument, while attempting to maintain an air of impartiality. In line with Stephenson and Carter (2011), Mount and Cavet (1995) come to point out significant elements of research that are lacking in previous studies, that being, the novelty and "luxury" of funding, and the process of obtaining and implementing MSEs.

> Unfortunately, it is usually easier to obtain funding for the purchase of tangible, novel and specialist equipment than it is to secure financial support for adequate staffing ratios and appropriate training in order to enable children and young people with severe or profound and multiple learning difficulties to gain the most from their environments. The electronic wizardry of flashing lights, responses to sound or movement, the glistening facets of the mirror ball and the hypnotic quality of fibre optics create a false impression of quality and luxury and there is a fundamental need to recognize that the quality of staff input is of paramount importance and that further research is essential before any conclusions can be drawn about the unique benefits claimed for multi-sensory environments (Mount & Cavet, 2007, pg. 54).

This unique approach emphasizes objective reasoning within the MSE debate. Does research positionality itself reflect a specific outcome, whether positive or negative, leaving aspects of research methodology compromised by researcher bias from the outset? More than questioning the MSE approach, this study questions qualitative research validity in its entirety under the MSE or Snoezelen banner, despite employing a qualitative analysis.

The use of 'Snoezelen' as multisensory stimulation with people with intellectual disabilities: a review of the research by Hogg, Cavet, Lambe, and Smeddle (2001) report on an in-depth literature review that explores the credibility and transferability of qualitative research and the reliability and validity of quantitative research within the MSE theatre.

> With the exception of six and seven, all the other five studies provide information on the reliability of observations and all studies support their findings with appropriate analyses. The remaining studies tended to use partial Applied Behavior Analysis designs omitting essential control procedures and reliabilities. In one study for example, within session comparisons of a range of behaviors under social Vs. nonsocial interaction conditions were employed, with specific pieces of equipment varied, but while assessment of reliability is referred to, no data are reported (Glenn et al., 1996). In fairness it should be added that though framed in research terms, the principle concern in some studies was to focus on qualitative data collection... (Hogg et al. 200, pg. 361)

As demonstrated, many MSE studies have adhered to recognized modes of research but have mostly predicted their findings. This trend has led to an ever-increasing call for more research to be done in this area. Hogg et al. (2001) explores this dichotomy, concluding:

It is clear that much of the literature on Snoezelen reviewed demonstrates a wide range of positive outcomes for people with intellectual disabilities. Not all studies, however, report positive results, and the diversity of participants and methods makes any premised interpretation of such inconsistency extremely difficult. Nor can any inference be made regarding whether the more or less adequate the research design is, the more or less likely positive or negative findings will emerge. Among the better designed studies both positive and negative findings were reported. Nevertheless, it is clear that "loose" designs do appear generally to lead to highly positive outcomes and may reflect in some measure positive expectations and commitment (Hogg et al., 2001, pg. 367-368).

Along a similar line, Botts, Hershfeldt and Christensen-Sandfort (2008) conducted an *Empirical Review of Product Representation* of Snoezelen MSEs. The authors state that, given the absence of empirical literature examining Snoezelen environments in day school settings, the authors analyzed five studies that were conducted in residential settings (Botts et al., 2008). In the world of evidence-based practice, Botts et al. (2008) automatically reinforce that a qualitative approach is sub-par. Botts et al. (2008) identifies a plethora of peer-reviewed articles but came to the final determination that scientific based research, and thus worthwhile research, is nonexistent on this subject. They conclude that, in the absence of proving product efficacy in the form of quality, replicable peer-reviewed research, American educators should not allocate public funds to unproven, though promising, interventions (Botts et al., 2008). Although a discursive dialogue from inception, Botts et al. (2008) seek to position quantitative validity and reliability as the deciding factor in assessing Snoezelen and MSEs. Nevertheless, despite the article's overt attitudinal negativity, it brings to light the need to explore a variety of research avenues in this area.

Conceptualization or Concept Exploration

In contrast, Hiroshi Anezaki (2004) in *Snoezelen: Its Effects on the Education for Infants with Severe Motor and Intellectual Disabilities* contributes a unique perception of MSEs. Anezaki (2004) seeks to position Snoezelen, in part, in the realm of an idea, stating, "Snoezelen is neither a cure nor a set of teaching methods but, rather, it can be called an idea of how to be concerned with people with disabilities and offer assistance on necessary occasions" (Hiroshi, 2004). The findings of Anezaki's study were positive. Both infants and mothers found growth, relaxation and development in their experience.

> Many mothers wanted to continue Snoezelen sessions with the center (eight out of ten). Many of which expressed the view that the Snoezelen environment offered a peaceful, relaxing environment in contrast to their usual hectic lives, traipsing back and forth…Mother-and-infant Snoezelen sessions appeared to have had a positive effect on the mental fatigue of the mothers. The mental support provided to the mothers by the Snoezelen sessions led to mother and child related growth and development which is very important for creating a base for the development of infants with severe motor and intellectual disabilities (Hiroshi, 2004, pg. 96).

MSEs seek to situate a positive and relaxing experience within a person-centered context. Locating success within feelings, thoughts, mental health, sensory modulation and relaxation, MSEs allow for a free space of exploration.

It is through these processes and research that bring us to our modernistic perspective and understanding of sensory exploration, within the educational lexicon, as it relates to MSEs.

MSE research must continue to conduct studies of various methodologies to combat a circular stifling trend in this area. Be it qualitative or quantitative, the value of continued MSE research resides in continued global dialogue. Throughout this thesis, I hope to contribute a unique avenue of exploration through applicable research conducted in schools, based in an inclusive conceptualization, using interviews and pictorial representations. Throughout my research, I hope to improve critical understanding of the use of MSEs in education.

Today, educators integrate sensory exploration, tools and insights to enhance, alter and diversify educational experiences for students. Using Snoezelen and MSEs as tools of exploration, some Manitoban schools K-12 have embarked upon a journey into the area of multi-sensory education.

Discussion

My research is focused on the application and conceptualization of Snoezelen and MSEs in Manitoba schools K-12. In this chapter, I analyze the MSE concept and its application through a critical lens, applying an immanent critique (Antonio, 1981) and genealogy (Anaïs, 2013) to explore potential contradictions. This has enabled me to provide insight and offer improvement to the current support service delivery model, as well as educational thought, practices and assessments surrounding disability in Manitoba.

In recent years, Snoezelen and MSEs are terms that have, at times, become synonymous. If we apply an immanent critique (Antonio, 1981) it soon becomes apparent that this connection is cursory. Snoezelen, as aforementioned, reflects an idea of self-realization, discovery, enjoyment, calm and agency. It is a process by which the participant is

exposed to contingent and noncontingent sensory technologies (Bozic, 1997) and or experiences that tempt him or her to explore, discover, and relax. It is a philosophy one can apply in any situation, environment and indeed belief system. There are sensory gardens and spaces that apply this philosophical motif in an effort to support and engender an inquisitive, relaxing and enjoyable state (Hulsegge & Verheul, 1987).

MSEs on the other hand are rooms, or entirely man-made spaces, that seek to provide a similar experience of discovery, enjoyment and calm, albeit in a linear manner. In the 1980s, the term 'Snoezelen' was copyrighted by a corporation (Flaghouse) that sought to mass market, distribute and produce its brand of Snoezelen/MSE technologies (Quality Palliative Care in Long Term, Retrieved November 14, 2017). This inevitably led to term interchangeability, unrightfully so. Today, Manitoba schools K-12 are building and exploring MSEs in an effort to provide calm, discovery, equilibrium restoration and therapy to students with exceptionalities (disabilities). I believe this practice is a progressive step in acknowledging the sensory factors and stimuli that can and do affect learning, attention, focus and emotional output. Through these spaces, many have reported a calming and relaxing effect that allows students to regroup, refocus and integrate back into their daily routines. Although both the therapeutic and recreational approaches have their benefits, consistent application is lacking.

In Manitoba, the pedagogical rationales for MSEs seem to vary from school to school. It should be noted, at this juncture, that the author is relying on firsthand information and or information collected through a mini study conducted within the framework of a qualitative research course, *Effects of Multi-Sensory Environments: Perceptions from Teachers* (Baker, 2017), to inform this section of discussion. It appears that Manitoba schools follow local information and or expertise in their installation and application of MSEs. The lack of

cohesion among school divisions, when it comes to the use of these rooms, is apparent. As such, every installation and application of MSEs appears to be done at the behest of individuals or school or divisional teams rather than as the result of a collaborative effort by several divisions or the province as a whole. The potential result of these practices include: (a) a lack of unified policies and procedures that govern the space and its uses, (b) no clear budgetary guidelines, (c) varied conceptualizations of the space, (d) limited philosophical understanding of Snoezelen, and (e) limited research awareness of MSEs. These problems are pervasive. As such, each issue will now be discussed individually applying an immanent critique (Antonio, 1981) to expose apparent contradictions and potential "otherization" (Cesaire, 1972) of students with exceptionalities (disabilities).

Absence of Unified Policies or Procedures

The recent emergence of MSEs as an educational tool in North America and the apparent lack of collaboration amongst Manitoba school divisions in their design and use, has led to a disjointed process of MSE space governance and oversight. Currently, there are no public policies or procedures that discuss or provide descriptive parameters governing MSEs or Snoezelen. Furthermore, school divisions do not have procedural documentation governing the use and objectives of MSEs, as might be reflected in a publicly accessible curriculum. These issues are discussion points that may occur among student service teams and individual educators, but division wide plans are largely nonexistent. In essence, MSEs have become a 'back-door' ad hoc approach used with students with exceptionalities (disabilities) and for those students who have sensory needs and/or dysregulation. With a lack of guidance, collaboration and knowledge of the MSE and its background formulation, many educators and divisions use these spaces as pseudo-quiet rooms, time-out areas, and/or an escape spaces to place students when their behavior or actions exceed "normative" levels.

Once students find themselves in an MSE, what exactly do they do? How do MSEs achieve sensory regulation? What tools and technologies comprise an MSE and how are they used?

With a lack of governing documentation, schools may experience irregular and maladaptive results and outcomes. What is needed is a collaborative approach, between school divisions, clinicians, student services teams and the provincial education authority (Manitoba Education and Training), to develop cohesive, progressive and educative policies and procedures surrounding the use of MSEs.

Snoezelen and MSEs, from their inception, were designed for the purposes of meeting sensory needs, including the sensory regulation, calming and relaxation of those with exceptionalities (disabilities). These spaces where designed by teams that sought out parental input and transparency. Conducted in an open manner, MSEs and Snoezelen are potentially inviting practices for all (Verheul, 2009).

In a relatively short period of time, therapists, hospitals, hospices, businesses and educational institutions have appropriated the practice to suit their specific needs. Nevertheless, despite a wide range of uses and clientele, Manitoba schools K-12 have largely used these spaces for students with exceptionalities (disabilities). In the absence of unified and uniform policies and procedures, MSEs have potentially become another pull-out program. This, in turn, re-situates students with exceptionalities (disabilities) as an "other" (Cesaire, 1972), which runs counter to the principles of Universal Design for Learning (UDL) (Reimer, 2010) and the inclusion movement. It is through a poignant and consistent framework that MSEs will become safe, productive and well utilized spaces consistent with Manitoba's inclusion policy (Education and Training. (n.d.), retrieved December 18, 2017) and The Public Schools Act (Justice, M. (n.d.). Manitoba Laws retrieved December 18, 2017).

Budgetary Guidelines

In the 1980s, Flaghouse undertook a process of copyrighting the term 'Snoezelen' (Quality Palliative Care in Long Term Care: About the ... (n.d.), retrieved November 14, 2017). This allowed Flaghouse to market "Snoezelen Multi-Sensory Environments" as a product.

> ….[that] incorporates a specialized selection of sensory equipment and materials that can help clients adapt their responses to sensory stimulation and to advance education and therapy goals. Each Snoezelen MSE is tailored to meet the needs of specific populations according to age and ability. The blends of sights, sounds, textures, aromas, and motion provide stimulation of the primary sensory systems and can be modified to meet each participant's sensory needs (Snoezelen® MSE. (n.d.), retrieved December 18, 2017).

Flaghouse is the largest supplier of MSE equipment in North America. MSEs, as a complete room, can range between $10,000 -$150,000. For an educational institution, it can be a costly endeavor, especially when issues such as a lack of knowledge and information on their historical and philosophical underpinnings and their use are potentially unknown. In addition, these concerns must be coupled with the absence of unified policies and procedures on their use with students with exceptionalities (disabilities). Moreover, how funds are spent to comprise a MSE vary. Unless a special design service is paid for and utilized, individuals or teams will make vital decisions on room design, technology purchases, and the utilization of educational spaces. This will affect the flow, use and conceptualization of those spaces, and can become the catalyst for, or barrier to, successful usage.

A further complication to this notion is the idea that MSEs are the culminating result of over 200 years of research into sensory development, awareness and therapy. The commodification of this vast historical process for a substantial cost lends itself to some skepticism. A more suitable ideal would be to combine a variety of sensory and educative based approaches, including MSEs, with complementary programmatic goals.

Conceptualizations of Space and Limited Philosophical Understanding of Snoezelen

The way we view a subject is the way we understand, relate and interact with it. In essence, the conceptualization of anything, in this instance the MSE, informs and shapes our reality and outlook. Currently, support service delivery begins from a deficit-based perspective. This perspective is governed by the ideal that MSEs are exclusively for students with exceptionalities (disabilities); and that these spaces function, initially and primarily, from within a dysregulation modality. In the case of MSEs, the educators' and clinicians' conceptualizations are of dramatic importance. To conceptualize a pre-designated space from a deficit perspective, allows for the space to be informed by exclusion, leading to a very clear process of "otherization" (Cesaire, 1972), and by varying degrees, "thingification" (Freire et al., 1993).

Thingification (Freire et al., 1993) is a process of dehumanization through which humans (as objects) have no autonomy and therefore no ability to rationalize and conceptualize knowledge at a personal level. As a result of this initial misunderstanding, a well-intentioned method may become a system of oppression and control (Freire et al., 1993). In MSEs, participants might become both segregated and, to a certain degree, dehumanized through a process of knowledge elitism and constriction. By contrast, allowing students to discover, mold and absorb knowledge is a process of ownership which is enlightening and uplifting. Only a MSE space, free and open to all, integrated into school

environments, without prerequisites for use, can be an inclusive and inviting practice. As Pagliano (1998) contends;

> Viewpoints regarding the essential nature and purpose of the MSE, whether it is a place for leisure and relaxation, for therapy or for education, do not appear to be mutually exclusive or distinct. It seems that, at this school at least, the way staff construct the MSE is undergoing a paradigm shift, where the nature of the MSE is being redefined in a more sophisticated, collaborative and inclusive way. The new constructs bear some resemblance to ideas being expressed in political theory and architecture. A classification of the MSE as a particular type of space can be made 'single-minded' or 'open-minded', determined by its function and design (Pagliano, 1998, pg. 107).

The philosophical underpinnings of Snoezelen also play an essential role in conceptualizing a MSE. As touched upon, Snoezelen informs and shapes the way we relate to MSEs. Nevertheless, the way in which MSEs are conceptualized, in the realm of education, largely stands in opposition to Snoezelen. The importance of cohesion between a grounded philosophical approach and conceptualization are integrally important.

> MSEs can be developed for many different functions, analogous to Walzer's open-minded space classification. The open-minded MSE is: A living environment where there is a dynamic balance between constancy and change, where the environment is determined by the needs of the user and shaped by the intelligence and sensitivity of the trans-disciplinary team that manage it. This new MSE is a dedicated space or room for relaxation and/or work, where stimulation can be controlled, manipulated, intensified, reduced, presented in isolation or combination, packaged for active or passive interaction, and temporally matched to fit the perceived motivation, interests,

leisure, relaxation, therapeutic and/or educational needs of the user. It can take a

variety of physical, psychological and sociological forms (Pagliano, 1998, pg. 107).

Creating and preparing a MSE can be a daunting task to the average school and or in-

school student support team. A collaborative approach, including varied members from

across school divisions and knowledge sources, should be available to make the best and

most informed choices. As Paulo Freire (1993) contends, our ontological vocation is towards

humanization; to be able to engage in 'conscientizacao', which is learning to perceive social,

political and economic contradictions and to take action against the oppressive elements of

reality (Freire et al., 1993). Creating an open and fluid MSE, where all are welcome, allows

for a multi-tiered hub of learning, exploration, calm and relaxation. In line with holistic

learning, the whole student must be addressed, allowing for a reconceptualization of space in

education.

Snoezelen, like mindfulness and social-emotional learning, is an indicator of an

educational paradigm shift away from the rigidity of the 1950s into an era of whole pupil

learning. In blazing the trail of inclusion, inclusive, good-quality education is a foundation

for dynamic and equitable societies (Tutu, Desmond.(n.d.), retrieved December 18, 2017).

**Present Support Service Delivery and Educational Thinking on Disability and
Assessment**

Manitoba's current support service delivery models differ in both breadth and depth,

ranging across Consultative-Collaborative (CC), Response to Intervention (RTI), and

Universal Design for Learning (UDL) models (Reimer, 2010); all seeking to address and

support all students. The way in which these approaches interact and affect students with

PIMDs vary, sometimes dramatically, from school division to school division. Snoezelen and

MSEs, along with mindfulness, fit within the continuum of the prevailing service delivery

model. It is only due to the newness of these approaches within education in Manitoba, that they have remained absent from the "official" educative repertoire. These approaches allow for fluid and supportive whole student paradigm to emerge within our current system. These approaches also allow for a reconceptualization of what exactly our current educational paradigm consists of, how it is delivered, and what falls under the term education.

Today, there are prevailing ideas of 'strength based' approaches and 'people first language' that focus on positivity rather than perceived deficits. In taking this further, there are many professionals in education that believe labeling in any fashion, including using the term disability to conceptualize a person is consistent with a process of thingification (Freire et al., 1993). Nevertheless, through inclusive practices and conceptualization, a process of continued authentic reassessment is considered best practice (Freeze, 2017).

As a source of best practice, the current educational system in Manitoba must bring together student service teams, administrators, clinicians and panels of educators across school divisions to discuss, on both a micro and macro level, what we seek to mean when we use terminology and educational nomenclature, like MSE or Snoezelen. Opening up lines of communication and forums for discussion within the profession is the single most important aspect of change. Through these avenues, educators could explore new and emerging ideas, gain insight and access to emerging practices and grow their awareness of our ever-evolving field. In the medical profession, doctors attend numerous presentations, conferences and discussions about emerging practices, threats and ideas in their field. I believe education should follow suit. In a rapidly changing society, education needs to become more flexible through dialogue and collaboration in an effort to re-conceptualize education and innovate into the future.

Current Implications

 Current research in the area of MSEs is both limited in scope and field of reference, as it is largely centralized in a European context. Within this community of research there exists an even-sided debate that reflects some skepticism. Significant areas of contention are rooted in the size and bias evident in some qualitative studies and the lack of quantitative research into the efficacy of MSEs. Comparisons across studies are difficult due to differences in participant criteria and other unique variables, related to the variations in the composition and utilization of MSEs that inherently reside within this area of study. Since statistically significant effects cannot be established, many have resigned the field to an experimental actuality, banished from the realm of logic and rationalism. On the other hand, many qualitative studies have come forth with auspicious results, formalized through rigorous vetting processes.

> Ongoing efficacy studies on the Sensory Room are being conducted on the Acute
> Psychiatric Unit for Adults at UMASS Memorial Hospital in Worcester
> Massachusetts. Data on the use of the room is kept in a logbook. Patients keep track
> of their information on a form which designates which type of sensory input was
> chosen along with a self rating form which rates their level of stress on a scale of 1-10
> before and after using the sensory room. Reflecting one year of data, and 1,089 visits,
> showed marked decreases in perceived levels of stress averaging a 38% reduction.
> (Champagne, 2006, pg.7)

To date, established limitations of MSEs include a) cost, b) maintenance, c) meaningful philosophical conceptualization, d) use of space, e) lack of convincing efficacy research, and f) a lack of research into the educational use of MSEs. The education community should continue studying this phenomenon, using a variety of different lenses to

interpret and explore the data collected. Future implications for such research should explore:

a) perspectives from teachers, b) the student clienteles that are using the MSE, c) the intended

outcomes for MSEs, and d) how they are actually being used (e.g., therapy, curriculum,

leisure, time-out, isolation, etc.). The continued exploration of this area will lead to a greater

quality and quantity of services and clarity within the practice.

As such, throughout this thesis, I have explored the varying degrees to which

Manitoba school divisions have begun to engage in the use of MSEs. I choose to

conceptualize this practice as a form of experimentation aimed at developing productive,

happy and healthy learners in body and mind. Manitoba schools K-12 have taken a practice

they believe will help their schools' culture, environment and productivity and have applied

it to their practice. This initiative has opened up the discussion surrounding MSEs and many

other sensory related tools in education. Since discourse shapes and molds our perspectives,

an increase in said practice will inevitably lend itself to a process of betterment for all. Our

sensory experiences play a vital role in virtually every aspect of our lives. I believe it is our

duty to continue exploring this area as we proceed into the future.

> Our five senses–sight, hearing, touch, taste and smell–seem to operate independently,
> as five distinct modes of perceiving the world. In reality, however, they collaborate
> closely to enable the mind to better understand its surroundings. Our senses regularly
> meet and greet in the brain to provide accurate impressions of the world. Our ability
> to perceive the emotions of others relies on combinations of cues from sounds, sights
> and even smells. Perceptual systems, particularly smell, connect with memory and
> emotion centers to enable sensory cues to trigger feelings and recollections, and to be
> incorporated within them. Cross wiring of the senses themselves provides some of the
> most fantastic fodder for illusions, inventions and just plain art (Groeger, 2012).

Using an immanent critique (Antonio, 1981) and genealogical analysis (Anaïs, 2013) to inform the discussion, I have offered suggestions on a formal and informal reconceptualization of education. Through our exploration of contradictory imperatives, we have come to see the process of education as a fluid social construct levied against historical, political and economic components. Situating Snoezelen and MSEs within this reality, my analysis has endeavored to highlight current issues of segregation, labelling of students, current support service delivery flaws, assessment issues, and various forms of conceptualization, with 'space' being at the fore. We must use these ideals in a continuous audit cycle to bring to light that which would prefer to remain hidden. As we enlighten our practices, we will be rewarded with a profusion of gifts, not the least being better-rounded, established and fulfilled lifelong learners.

Chapter 3

Methods

As an emerging area in education, Multi-Sensory Environments (MSEs) have increased in Manitoba schools K-12. Few studies have explored MSEs in education in a Canadian context, leaving the field of education, as it pertains to MSEs, largely unexplored. It is crucial to gain access and insight into educators' perceptions of MSEs. Informed research on the subject should seek to shed light into educators' practices, knowledge and training with respect to MSEs as well as their utilization and conceptualization of MSEs. Such research has growing implications for future programmatic exploration and practices in the field of sensory education. Furthermore, this field of study has increasingly vital relevance in the area of inclusive education.

In order to document and analyze the perspectives of Manitoba educators' regarding MSEs, I have conducted a qualitative study that explores one main question;

What are educators' perceived effects of Multi-Sensory Environments in Manitoba schools (K-12)?

Through this question, I inquired into varying aspects of educators' perceptions of MSEs, including, but not limited to, educators' conceptualization of: a) the history and philosophy of MSE spaces, b) the purposes and use of MSE space, c) the tools and provisions that comprise MSE spaces, d) training required to use MSE spaces, e) the role of inclusion in the MSE space, f) transparency in the use of MSE spaces, and g) collaboration with other educators in the use of MSE spaces. The findings, themes, and pedagogical and philosophical insights that emerged from my study are discussed and recommendations are made to strengthen further research on the subject.

Through my study, I examined the perceptions, beliefs and knowledge educators hold, as they pertain to MSEs in Manitoba schools K-12. This project examined educators'

methodologies, and pedagogical and strategic approaches to MSEs, in order to gain a greater insight into this emerging area.

Identifying and Recruiting Participants

The participants in my study were educators who consistently used, or where involved with, Multi-Sensory Environments in their school and in their teaching practices. The term 'educator' may refer to teachers, clinicians or administrators, provided they had direct involvement and consistently used their MSE for educational purposes. As the principal investigator, I conducted purposive sampling of participants through their school divisions and provided the participants with a recruitment letter (Appendix A). As MSE research is not that common, an email recruitment script for potential participants (Appendix C) was sent to the superintendents and or assistant superintendents of eight school divisions representing both urban and rural locations. Each school division was sent email recruitment scripts individually to ensure quality interaction and attention. The school divisions were asked to send the email recruitment script to potential participants (Appendix C) in their staffs. The four responding participants who fit the criteria were provided with a consent letter for participation in the study (Appendix D).

Following participant selection, I conducted interviews, as noted above, following interview protocols (Appendix B) in a semi-structured format. Interviews were conducted outside of school hours to avoid ethical concerns or undue hardship and were conducted in-person or over the phone. Interviews conducted in person were conducted at a quiet and private location that was mutually convenient for both the participant and I. The location varied. I sought permission from the specific school division/schools (superintendents and principals) for permission to photograph their MSE for this study. No students, staff, parents or other persons were photographed. All individual names and school divisions have been

and will be kept confidential through the usage of pseudonyms in all publications and presentations of this study. All information collected will be stored for 5 years after graduation (Jan. 1, 2024) and may be used to inform my (principal investigator) Ph.D. Information will be kept on a secure, password protected laptop. Any subsequent transcriptions will be kept in the principal investigators' office inside a locked safety box. Any information, findings and results of this research study will be used for the purposes of publication, presentations (including, but not limited to conferences), and may be used to inform my Ph.D.

Data Collection

A basic qualitative research design was used in my study that incorporated 2 semi-structured interviews from each of the four separate educators, approximately 45 minutes to 90 minutes in length, along with photograph representations (no students or staff were included in these photographs of the MSE spaces) of the MSEs for contextual relevance and perspective, and where applicable, comparative analysis. The interviews were spread 2 weeks apart to allow for educator reflection. At the second interview, a transcript from the prior interview was provided for reference and editing (member checking). Transcriptions were completed by the principal investigator, Mr. Michael Baker. All participants completed the member checking process with all the transcripts being clarified or edited by the participants. Due to the frequency and consistency of member checking by all participants, the data reflects, at times, a specific level of official nomenclature.

Data Analysis

The establishment of credibility and transferability are important areas of qualitative research (Merriam and Tisdell, 2016). In this study, I use a variety of approaches to establish credibility and transferability.

Credibility was enhanced through the use of multiple interviews seeking thick, rich descriptions. Because humans are the primary instrument of data collection in qualitative research, interpretations of reality are accessed directly through observations and interviews (Merriam, & Tisdell, 2016). Furthermore, this study referenced multiple sources in a cumulative effort to establish triangulation. Through interviews, photographic representation and reference to documents relevant to the phenomenon of MSEs, triangulation lent credibility to this study. As Patton (2015) explains, "triangulation, in whatever form, increases credibility and quality by countering the concern that a study's findings are simply an artifact of a single method, a single source, or a single investigator's blinders" (Merriam and Tisdell, 2016).

Member checking was also applied in this study, by providing copies of transcribed interviews to the participants for reference, editing, clarification or deletions. Through this process, participants were able to recognize their experience in the transcription and suggest some fine-tuning to better capture their perspectives (Merriam and Tisdell, 2016). Finally, researcher positioning, or reflexivity, is provided in the promotion of transparency. As such, the processes of triangulation, member checking and researcher positioning are strategies that were employed in an effort to establish credibility in this study.

Transferability is concerned with the extent to which the findings of one study can be applied to other situations. Throughout this study, I sought to analyze educators' ideas, practices, beliefs and perceptions surrounding MSEs. If a MSE is used in a Canadian context, the findings of this study may be applied in a variety of ways. Due to the malleability and contextual relevance of the subject, the data that emerged can be generalizable elsewhere. Thick rich description coupled with pictorial reference is provided to the reader with multifaceted forms of information to draw from, when making a connection. Finally, variation in sampling sites and participants allows for the possibility of a greater range of

application by the reader or consumer (Merriam and Tisdell, 2016). Transferability and credibility are two components of trustworthiness in qualitative research. The aforementioned strategies lent credibility and transferability to this study.

Researcher Positioning

I believe it important to outline researcher positioning on MSEs for clarity and transparency. I will briefly outline my connection to MSEs and how I came to the subject area.

After training as an educator at York University, I sought a position working with students with disabilities. Upon graduation, I immediately began upgrading my courses to reflect and acquire additional training in the area of inclusive education and guidance and career counselling. In my second year of teaching, I began working with students in a Life Skills program. As a co-teacher, I came into contact with MSEs in my daily practice. I also had opportunities to discuss the subject with my co-teacher. Continuing my studies at the University of Manitoba, I often completed research projects and assignments focused, as part of course work, on MSEs. Moreover, over the course of last 4 years, I have had the opportunity to implement an MSE and work closely with the subject. Having a fascination with MSEs and professional experience in the area, I have continually sought opportunities to study, learn and interact with educators using MSEs in Manitoba Schools.

My positioning in relation to MSEs and their effectiveness is one of hopeful skepticism. When implemented and conceptualized in a proper fashion, I believe MSEs provide an alternative tool for educative means. The function and purpose of MSEs are means, and not ends in themselves. As a tool, amongst many, I believe MSEs hold a unique position, one that may prove advantageous in a variety of ways. Nevertheless, I believe this emerging area requires further critical inquiry due to the lack of: a) relevant Canadian

research, b) guidance from government curriculum documents, c) school divisions'

transparency about their philosophies on MSEs, d) regulations, training, and professional

development presentations, and d) guidance and support in collaboration and information

sharing. As a professional working as part of a student service team, it is imperative that

schools begin to explore MSEs in an open and inviting manner. Allowing for discussion,

critique and collaboration will only enhance Manitobans knowledge and professional

practice/learning in this area. In an effort to confront personal opinions, thoughts and bias

during data collection, I asked my advisor to read some of the coded transcripts and comment

on my analysis. I order to become more aware of my evolving perspectives, I kept separate

notes on how I responded to participants and what they had to tell me as the study

progressed.

As a researcher, I hope to continue to explore this subject in order to invite discussion

on MSEs in inclusive education, in Manitoba and abroad. Broadening the scope of inquiry

will contribute to a continuing platform for professional learning and increasing inclusive

education in Manitoba. In the following chapters, the findings are presented and discussed in

Chapter Four, and the implications, limitations, recommendations and conclusions are

presented in Chapter Five.

Chapter 4

Findings and Discussion

In this chapter, I present the findings of my study into educator perspectives on MSEs. My hope was to better understand how an inclusive educational framework relates to the conceptualization and implementation of Multi-Sensory Environments. Although a variety of questions and information arose, the data from interview one was coded thematically into four distinct categories, which include: a) staff who frequently used or were associated with the MSE, b) description of behavioral indicators of the students who use the MSE, c) participant description of the purpose of the MSE, and d) equipment that comprised the MSE. The second and final interviews focused primarily on the topic of inclusion in education and MSEs (Appendix B). Both topics were explored individually and relationally. The themes that arose in this interview were: a) inclusive educations purpose, definition, and goal, b) current practices in MSEs, c) professional development, and d) areas for improvement. I follow this with a discussion of my findings.

Throughout my study, I sought to answer one main question:

What are educators' perceived effects of Multi-Sensory Environments in Manitoba schools (K-12)?

This question explores varying aspects of educators' perceptions of MSEs, including, but not limited to, educators' conceptualization of: a) the history and philosophy of MSE spaces, b) the purposes and use of MSE space, c) the tools and provisions that comprise MSE spaces, d) training required to use MSE spaces, e) the role of inclusion in the MSE space, f) transparency in the use of MSE spaces, and g) collaboration with other educators in the use of MSE spaces.

Participants

      I contacted seven school divisions in the province of Manitoba, Canada. The Project Information Letter (Appendix A) was sent to Superintendents and/or Assistant Superintendents of Student Services. The Email Recruitment Script for Potential Participants (Appendix C) and Consent Letter for Participants (Appendix D) was also sent to Superintendents and/or Assistant Superintendents of Student Services with the request they be disseminated amongst teachers, clinicians or administrators for participation in my study. Furthermore, a five question survey (Appendix E) was sent to Superintendents and/or Assistant Superintendents of Student Services or their delegate to complete. Five school divisions did not participate. Non-participation was conveyed by: a) declining, b) having no voluntary participant emerge, or c) failing to reply to email correspondence. The study proceeded with four participants across two school divisions representing both urban and rural geographies. No school division completed the survey (Appendix E).

      A qualitative research design was used, incorporating two semi-structured interviews, approximately 45-90 minutes in length, outside of school hours, spread two weeks apart. Informed voluntary consent for participation was garnered from each participant prior to study commencement. The two-week respite period between interviews enabled the participants to both reflect on their ideas, knowledge, research, current practices and pedagogy in light of having the opportunity to review their transcript from their previous interview. Participants were encouraged to read, analyze and edit their transcript for clarity and content. As an addition, participants were requested to provide, where applicable, photographs of their MSE for comparative analysis. Two participants submitted photographs for comparative analysis (Appendix F). Unfortunately, the photographs were few in number and quite nondescript. All participants and school divisions have been kept anonymous throughout this study. Anonymity was maintained as a method of drawing out candid

participant interaction and as a safeguard. Furthermore, information blending was used throughout my findings and discussion to maintain participant anonymity.

The participants held various positions within their divisions, including Occupational Therapist, Administration (Principal/Vice-Principal), and Senior Administration. The participants were active in a variety of Manitoba schools, representing grades K-12. The participants also represented a variety of active areas in education, including; Clinical Services, School Administration and Senior Level Administration. It is also worth noting, multiple participants had previous professional experiences at a variety of grade levels and held a variety of positions, including Classroom Teacher, Resource Teacher and Special Education Teacher (Student Service Teacher). As such, the participants in this study provided a veritable snapshot of practices, pedagogical backgrounds, experiences, specialties and approaches currently active in Manitoba schools K-12.

First Interviews

The first interviews focused on the functional aspects of the MSEs in the participants' schools (Appendix B). Although a variety of questions and information arose, the data was coded thematically in four distinct categories, which include: a) staff who frequently used or were associated with the MSE, b) description of behavioral indicators of the students who use the MSE, c) participant description of the purpose of the MSE, and d) equipment that comprised the MSE. The prevalence and reoccurring themes presented across all participants and school divisions.

Staff Who Frequently Used or Were Associated with the MSE

Prevalent throughout the first interviews, was the fact that Educational Assistants (EA), sometimes referred to as "support staff", were the primary staff member active in the schools MSEs. Educational Assistants were described as supporting students with a

"diagnosis" by, "implementing programming" and "modelling". It was clear Educational Assistants followed pre-set programs, sometimes referred to as a sensory profile, created by an Occupational Therapist (OT), and were directed by a Resource Teacher. As participant two stated,

> If a student doesn't have a diagnosis but the resource teacher, in collaboration with the classroom teacher, feels the student has dysregulation; they will consult with me (Occupational Therapist), on how the sensory room could be used to benefit that student on a case-by-case basis.

The Educational Assistants' use of their MSE and its functionality primarily was dictated either directly by the Occupational Therapist in a training session or through a "student sensory profile". Due to higher caseload demands, Occupational Therapists operated on a consultative and collaborative model, with slight variations that allowed for visitation and assessment at predetermined intervals or at the behest of a school administrator. As participant three recounted, "we also use her (Occupational Therapist) to educate our EA's…on how to use them (MSE) appropriately with particular students because they will have a profile and why or which sensory pieces fit best with that student". When the question, "are there any teachers, or professional staff involved in the MSE?" was posed, participant four stated with blunt certainty, "lots of EAs".

Many of the participants explicitly stated Resource Teachers, Classroom Teachers and Special Education Teachers are involved with the schools' MSEs. Nevertheless, they were noticeably absent from the discussion surrounding functionality, use, purpose, staff association, professional team involvement, conceptualization or professional development. In one instance, a "qualified educator" was described as creating a student's daily schedule

that would allow for the student to "work with the OT" on their sensory profile and or in the MSE. Direct involvement or consultation with teaching personnel seemed amiss.

Resource Teachers, Classroom Teachers and Special Education Teachers did not seem to contribute to a diversified collaborative team surrounding sensory learning, sensory regulation or MSEs. Those positions were consistently occupied by Occupational Therapists or other clinicians.

School Administrators (Principal/Vice Principal) were described as authorities of power or, gatekeepers, rather than as functional contributors to specialized knowledge, skills or professional development on MSEs or sensory integration in education. Specialization in that area was seen solely through the lens of Occupational Therapy. Participant four stated, "the administration will give me the space, if I do a really good sell job, and then usually they don't want active sensory programming in the hallway…". In contrast, participant two states, "sometimes school administration are very proactive, involved and promote a positive culture around MSEs in schools. Sometimes administrators are not as forthcoming and the MSE is clinician driven".

Description of Behavioral Indicators of the Students Who use a School MSE and Purpose of the MSE

The second emergent theme that arose from interview one involved descriptors of the students who use the schools' MSEs and the purposes of the MSEs. It provided indicators of inclusive practices and active student categorizations in Manitoba's K-12 schools. The recognition of power differentials located in language (i.e. semiotics) provides pedagogical and ideological insights that directly affect educational practices, procedures and policy. A main facet of this study concentrated on who used MSEs and how these participants were

selected. An added dimension to the findings is the current use of language and the reality it fosters, both for students and the purpose of MSEs in education.

Tables 1.0 and 1.1 lists the language used when discussing descriptive purposes of MSEs and those who use them. This allows for a compartmentalized look at the language associated with the MSE. Tables 1.0 and 1.1 indicate Manitoba K-12 schools' MSEs are primarily used for students with PIMDs, or those perceived to have "dysregulation". The language is suggestive of a clinically driven environment aimed at adverse behavior mitigation, sensory regulation and rehabilitation. These findings do not preclude the MSEs being used for other purposes. Nevertheless, the use of specific descriptors and context remained consistent across all participants suggesting primary functions and applications.

Table 1.1 lists descriptors, as stated by professional staff, of students who access the MSE. Although the role of inclusion will be discussed later on, it should be pointed out that the majority of descriptors used provide an initial insight into the conceptualization and function of MSEs in Manitoba's K-12 schools.

Equipment

The equipment located within the MSEs varied. The equipment tended to be targeted, multifaceted and multifunctional to meet the needs of an array of participants. A variety of permutations lends well to the inclusion of a broad participant base (Pagliano, 2012). Paul Pagliano (2012) *The multisensory handbook: A guide for children and adults with sensory learning disabilities* lists, describes and discusses MSE varieties.

In my study, participants named a variety of equipment and tools used to address the needs of their students. As participant one stated, "in early years, sensory rooms are very student specific or targeted, the rooms are designed or set up to meet the needs of the current student population that requires a MSE". Equipment listed by participants fall under the

categories of auditory, visual, tactile and calming (Table 1.2). Equipment was also used to support and build capacity in the areas of vestibular (movement) and proprioception (body awareness) with the use of "balance beams, exercise balls, ball pit, motion stools, rockers, swings and parachute". Olfactory equipment or strategies were not used by any of the participants.

Table 1.2 provides a list of the equipment active in the participants MSEs. Used in different contexts, for different students and with a variety of intentions, all material was expressly used to meet the needs of students. As participant three stated, "we teach sensory regulation and whole-body regulation. We teach how to pay attention to your own body and what its needs. We then give them (students) the tools and information to respond to that".

The participants also were asked about the cost of their MSE. Participants related the cost differs from school to school, but that "it can range from $200 to several thousand". Another participant recounted, "in the division it can range between $5000-$7000" for a higher-end MSE. Participants also said they reuse equipment when a school no longer needs it and they are creative when it comes to making sensory tools.

Second Interviews

The second and final interviews focused primarily on the topic of inclusion in education and MSEs (Appendix B). Both topics were explored individually and relationally. The themes that arose in this interview were: a) inclusive educations purpose, definition, and goal, b) current practices in MSEs, c) professional development, and d) areas for improvement.

Descriptive Purposes of MSEs and Those Who Use Them (Table 1.0)

Multi-Sensory Environments (purpose)	Participant Needs (who used the MSE)
Quiet (Room/Space), Relax, Calming	Students who need sensory management, regulation or stimulated activates
Self-Regulation, Sensory Diet/Activities, Sensory Input	Students who need deep pressure, revving-up or de-escalation
Social Engagement	Students who need a controlled environment
Skill Building (nonverbal signaling, eye contact, building language, reciprocal communication)	Students who have gross motor deficits
Relationship Building	Students who are over-stimulated
Proprioception	Students who have visual impairment
Stretching	Students who do not engage in traditional settings
Safe Space	Students who have underlying deficits
Movement (spinning, watching, rocking, rolling)	Students with Autism

Participant Descriptors and Behaviour Associated with the MSE (Table 1.1)

Participant Descriptors (who can access the MSE)	
Profoundly Disabled, Profound Students	Emotional Outbursts
Extremely Aggressive	Stress
ADHD	Hyperactivity
Low Functioning Students	Significant Autism
Significant Attachment Disorder	Non-Verbal
Population with Disabilities	Physically Challenged (wheelchair)
Kids with Sensory Profiles	

MSE Equipment (Table 1.2)

Auditory	Visual	Tactile	Calming
Headphones	Blacked-Out Walls Blue Walls	Stones	Bean Bag Chair
Classical Music	Dimmable Lighting	Mats	Swing
	Lava Lamps	Textured Objects (fidget tools, sensory bins)	Tunnel
	Globe, Strobe Light, Disco Ball	Bubbles	Tent
	Projector/Slides	Wire beads	Blue Walls
	Flashlights, finger lights	Kinetic Sand	
	Symbols to Support Teaching (Proloquo-2-Go)	Weighted Blanket, Vest	
	Reflective objects	Switch	
	Visual Timer	Lego	
	Fiber Optic Fall (Light)	Chain Link	

Inclusive Educations Purpose, Definition and Goal

The participants in this interview each provided their own definition of inclusive education. These definitions were, in part, in congruence with Moran's (2007) definition, which describes inclusive education as the entitlement of all children and young people to quality education, irrespective of their differences, dispositions or disabilities. It is about embracing educational values of equity, diversity and social justice (Reimer, 2010). Furthermore, aspects of participants' definitions also fit with Benjamin et al. (2003) and Manitoba Education and Training philosophy on inclusion.

Participants recounted inclusive education in both micro and macro context. Participant one stated, "inclusion means belonging in class and having friendships in a class…inclusion means you have a role to play and that your activities are meaningful..". From a broader perspective, participant four stated, "I think inclusion means making sure nobody is left out, I think it is looking at the whole school environment, so this just doesn't mean inclusion within the classroom". These perspectives complement each other, moving from a classroom to whole school environment. Nevertheless, participant three offered a more nuanced approach.

Inclusive education is not necessarily having to do the same things as everyone else but belonging in a space and feeling that sense of community. So, we try and include…by integrating in activities but also feeling functional and purposeful within the classroom context. So, let's say a student comes into a grade two classroom, they feel part of the classroom, they are valuable.

This approach is unique as it expresses value as a factor of inclusion. It addresses a wider frame of inclusion that reaches into notions of community. Participant two continues;

In terms of society, I think it allows everyone to have perspective on everybody's strengths and people as human beings and part of….everyone has a function in the world. Their opinions matter, they have thoughts, they have feelings, they are part of the greater world around us.

Locating inclusive education in a wider framework, participants described a fluid process of citizenship and development. Moving from classroom to community, the expressed understanding of this causal link remained evident across all participants. Nevertheless, the infusion of inclusive education in MSEs remains an area in need of development. Aside from an invitation for a friend to join their peer in the MSE, inclusive practices and thoughts regarding the use, conceptualization and function of MSEs was limited.

Current Practices in MSEs

Current practices, as reflected by the participants, situate MSEs as a space conceptualized, organized and used for students with disabilities or perceived "dysregulation". Zones of Regulation was continually referenced as the main regulatory system used in association with all four participants' MSE practices. Inclusion is rarely associated with the school MSE. When asked, "can we include everybody in the MSE and what would that look like"? Participant one's answer was resounding.

> So I would say no you can't include everybody because otherwise it would be a play zone…because then it would be used in ways it wasn't intended, so no it wouldn't be open to all students, only those who would need and benefit from it. Now I don't think that's not being inclusive, it's using a space the way it's intended, to be used for a certain population.

As was discussed throughout my thesis, conceptualization begets function. If a space is conceptualized through a medical/rehabilitative lens or if "normalization" is what is sought, exclusivity may be the result. On a similar note, when asked "would you recommend MSEs to others"? Participant three stated;

> Absolutely, I have seen the benefit of it. Is it for everyone? No, but for the population that uses it, it greatly benefits them and it's just part of good practice. Allowing kids who have sensory needs a place that is normalized. You have a place to be, you belong and to enjoy it for the needs that you have.

MSEs, if conceptualized and designed to meet the needs of all students, allow for diverse functionality. I am not suggesting MSEs cannot be used by students with disabilities or "dysregulation", I am suggesting they should not be exclusively for one population. MSEs have the capability of being a unique space within schools that can foster collaboration, creativity, calm, sensory exploration and learning that is cross-curricular. In that way, physical and attitudinal accessibility is confronted every day. As such, a greater level of inclusive practices and collaboration is needed in MSEs in Manitoba schools K-12.

Photograph Analysis

Two participants submitted photographs of their MSE for comparative analysis (Appendix F). The photograph data is discussed throughout, nevertheless, these photos provide a visual exploration of my study's findings.

The photographs displayed rooms with clear customization features. Both rooms contained tools for movement, space for Physical Therapy and a variety of tactile and visual technology (fiber optic fall, projector, ball pit). Both rooms presented as spacious and purposeful. These photographs provide a starting point for further conversations surrounding MSEs in Manitoba K-12 schools.

Photographs are increasingly useful for visual representation of space, lighting, equipment and functionality. These photographs provide snapshots of MSEs in Manitoba schools K-12, allowing for dialogue and reader contrast and comparison. Photographs remain of vital importance for future professional development, collaboration and analysis.

Professional Development

All four participants were asked questions relating to their professional knowledge and development on inclusive education and MSEs. Two participants acknowledge they had completed certificate programs in inclusive education, but these did not include MSE training. The remaining two participants acknowledged they had limited professional development in the area of inclusive education. All participants were in agreement with the Manitoba Education and Training statement on Inclusion. Nevertheless, continued professional engagement in inclusive education, either course work or periodic review of academic journals, was limited or non-existent. When asked about professional development in inclusive education, participants responded as follows.

- "I've probably read some articles; I don't know about research. I don't know anything specific, but I've probably read an article".
- "Not directly, no".

Participants were also asked about their knowledge of professional development on MSEs and Snoezelen. One participant cited Council for Exceptional Children as offering professional development on MSEs. Nevertheless, the remaining three participants had no formal training on MSEs. Furthermore, participant's knowledge of Snoezelen was limited to Flaghouse magazine, ultimately relating the concept of Snoezelen to cost. Participants were unaware of the philosophy of Snoezelen, its history, birth and its broad applications.

Areas for Improvement

Finally, participants were asked about areas for improvement in inclusive education relating to MSEs. Participants cited "space", "training", and "professional development opportunities" as areas of concern. Participants also cited a lack of curriculum or governmental documentation on MSEs as areas in need of improvement. When asked if a handbook or curriculum document on MSEs would be useful, participant one said, "I think that would be grand". Participant four was also in agreement.

> Absolutely, I think any area of the school, especially because we are dealing with EAs and new people, we have different understandings of what this is for. A manual or handbook would help to guide. For all those things that are questionable or as a frame of reference, the document would be very helpful because it puts parameters around the MSE.

Currently, Manitoba Education and Training does not have MSE specific curricula, policies or procedures. Furthermore, accessibility to MSE training, research or professional development in Manitoba is extremely limited.

Discussion

In this chapter, I have presented four emergent themes for each interview using detailed and meaningful description of data. I included many of the participants' narrative accounts to support my study's findings.

The interview findings demonstrate the creation, conceptualization and application of MSEs primarily remains clinician driven. This has been demonstrated through restrictions placed on users and functionality of space, specific language (pathology) associated with MSEs and participants, who was providing training, who was assessing and creating student profiles, and what equipment was included and who it was intended for. Although

administrators were involved in space and budget decisions, clinicians (primarily

Occupational Therapists) continued to be the primary driver in the conceptualization and use

of the MSEs.

The interview findings also shed light on which staff members were carrying out

clinician directed programming. EA's were largely seen as providing the greatest amount of

support for students in MSEs. EA's followed student profiles and clinician programming to

address students' sensory needs.

Absent from the findings was the role of the Resource Teachers, Classroom Teachers,

Student Service Teachers or Special Education Teachers. These positions should demonstrate

a greater role in the application, conceptualization and implementation of MSEs in Manitoba

schools K-12. This will be discussed further in the implications section. Nevertheless, using

their expertise, experience and research tools, these educators must play a significant role in

this area.

The findings also suggest inclusive practices within MSEs was an area in need of

development. With the MSE conceptualization shaped within a medical-rehabilitation model,

participants and the language used to describe them are consistent with individual centered

pathology. This approach creates a negative focus on the participant as someone in need of

fixing or rehabilitation. As a consequence, inclusive educative practices may quickly erode.

Besides limited friend invitations into the MSE, students were seen to be individuals

in need of separate care or programming. Although I believe there is a place for one-on-one

interaction in some educative circumstances, these practices should certainly not be

generalized nor should they shape an entire practice. Contrary to the findings, MSEs must be

conceptualized as a space that all students can use and access as part of an inclusive

educational system.

The cost associated with these spaces, as reflected by all participants, was very conservative. With $7,000 as the highest figure, these MSEs certainly run in the low end of cost. The findings suggest a school system that is budget conscious. With some MSEs costing as much as $50,000, MSEs in Manitoba schools K-12 reflect cost conscious practices. In the final chapter, I will present my implication, limitations, recommendations and conclusion of my research.

Chapter 5

Implication, Limitations, Recommendations and Conclusion

Throughout this chapter, I will present the implications and limitations of my research, providing recommendations for future endeavors and concluding remarks.

Implications

The implications of my research study, drawn from the emergent themes, suggest that: a) research, resources and professional development in the area of MSEs within inclusive education is limited, b) collaborative practices in this area (across staff, schools, and/or divisions) is very limited or nonexistent, c) MSEs are a primarily clinician driven practice, d) the concept of Snoezelen is rarely understood, and e) divisions have limited or no procedures or policies to conceptualize and guide their use of their MSEs.

Consistent with previously explored critiques (Antonio, 1981) (Anais, 2013), my study's emergent themes suggest a practice at its very beginning stages of implementation and understanding in education in Manitoba K- 12 schools.

Limitations

After reflecting on my study's findings some limitations emerged. Population validity is perhaps the most noticeable. The small data set, although able to provide in depth interaction coupled with thick and rich description, is only a snapshot of the potential diversity of practices and knowledge that is currently taking place in Manitoba's K-12 schools. Furthermore, the participants did not include Classroom Teachers, Resource Teachers, Student Service Teachers or Educational Assistants. This is also an area of continued concern present in the current academic literature. It is my intention to expand the

scope of research on MSEs in Manitoba's K-12 schools as a PhD student. Nevertheless, the reality of a small sample size is still a considerable limitation.

Design limitations also arose, creating limitations in the scope and diversity of participants and school divisions. My recruitment process went directly through school divisions, creating limitations to access of staff, facilities and school and divisional practices.

Time and geographical constraints also emerged as a study limitation. Participant and researcher availability and location remained a consistent area of negotiation and strategy. Research should be conducted across the province, regardless of geography, that would better represent current practices.

Finally, photographic data emerged as a limitation. Only two participants submitted photographs of their MSEs for comparative analysis. An increased amount of photographs of different MSEs would provide Manitoba schools K-12 with the opportunity to visually experience and compare and contrast as a form of collaboration and professional development. Transparency values both the observer and recipient in this case, contributing to the much needed dialogue surrounding MSEs and inclusive education.

Recommendations

I strongly believe in the importance of education and the ingenuity of educators. My recommendations, drawn from my study's findings, focus around the theme of continuous education and inclusive engagement.

Manitoba's K-12 schools must seriously consider the role of inclusive education in MSEs moving forward. Increased professional development in the forms of a) professional learning communities, b) cross-divisional professional learning groups, c) academic courses and inquiry, d) small group professional development sessions, and e) personal inquiry. Professional development will help to develop professional practices, standards, policies,

procedures and learning communities in the areas of MSEs and inclusion. The amelioration of adverse practices such as deficit-based pedagogy, improper use of educative spaces (punishment/time out/segregation), and inappropriate roles of paraprofessional staff (EAs) is vital for the development of a complex, meaningful and inclusive practice.

My study's findings reinforce my original critique. Manitoba's K-12 schools lack: (a) unified policies and procedures that govern the MSE space and its uses, (b) clear budgetary guidelines, (c) varied conceptualizations of space, (d) an awareness and understanding of philosophical understanding of Snoezelen, and (e) research knowledge and professional development on MSEs.

My study's findings reinforce the need for continual research and transparency in the area of MSEs and inclusive education. Research should focus on larger sample sizes, with varied professional representation, and the eventual production of provincial guidelines, models, policies and procedures that address and guide Manitoba's K-12 schools in the development of inclusive practices in MSEs. To address deficit-based language, pedagogy and practices, Disability Studies should be strongly considered to lay the foundation for more meaningful, robust and in-depth understanding and dialogue on inclusion in education.

Conclusion

The users of MSEs in Manitoba's K-12 schools must continue to collaborate, dialogue and seek out professional development opportunities into the future. My study's findings suggest Manitoba K-12 schools and school divisions are "working in silos" when it comes to their MSEs. Moreover, the application of inclusive educative practices in MSEs is seemingly lacking. The findings are suggestive of a process of "otherization" (Cesaire, 1972) and "thingification" (Freire et al., 1993) for students with PIMDs. The MSE can no longer be viewed as or operate outside the purview of inclusive education. MSEs must be

conceptualized and implemented with complex users in mind. MSEs and Snoezelen provides

an alternative conceptualization of space and learning that allows holistic exploration and

progressive cognizance to take center stage (Fowler & Pagliano, 2008). MSEs should be used

across curricular boundaries, from yoga, to mental health initiatives and mathematics. MSEs

can no longer be only for those with PIMDs. In our current fractious world, education must

seek to lead, being open to all those with perceived differences, embracing all.

Conceptualized with inclusive education in mind, MSEs continue to have the potential for a

creative and unique educative space for learning. We must push the boundaries of what was

and innovate for what is.

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Appendix A: Project Information Letter
Research Project Title: Multi-Sensory Environments: A Qualitative Exploration

Researcher: Mr. Michael Baker (Graduate Student: Bakerm38@myumanitoba.ca)
Advisor: Dr. Rick Freeze (Rick.Freeze@umanitoba.ca)

To Whom It May Concern

   As an emerging area in education, Multi-Sensory Environments (MSEs) have been implemented in some Manitoba schools. Few studies have explored MSEs in education in a Canadian context, leaving the field of education lacking in research in this area. Consequently, it is crucial to gain insights into educators' perceptions of MSEs. Especially the insights of those who use MSEs in their practice. Informed research on the subject will seek to shed light into the conceptualization and utilization of MSEs in Manitoba schools. This subject has growing implications for future programmatic implementation and exploration in the field of inclusive education. Depending on the findings, and the pedagogical and philosophical themes that emerge, recommendations to improve best practices for students (including students with disabilities) using MSEs and to strengthen further research into MSEs will be achieved through this study.

   This study will examine the perceptions and beliefs educators hold about MSEs in schools. This project will examine teachers' methodological, pedagogical and strategic approaches to MSEs, allowing for a greater insight into this emerging area. The project will seek to answer (1) main question;

   What are educators' perceived effects of Multi-Sensory Environments in Manitoba schools (K-12)?

A qualitative research design will incorporate two semi-structured interviews of educators using MSEs, approximately 45 minutes to 90 minutes in length, 2 weeks apart. In addition, pictures of the MSEs will be taken for comparative analysis. Photographs will be used to analyze things like design, instruments and technology, themes etc. Students and educators will *not* be photographed.

I am requesting this information letter be disseminated amongst teachers, clinicians or administrators' that may be interested in participating in this study. I would be happy to clarify any questions that may arise and encourage communication at your earliest convenience. Contact information is provided below.

Please note that you are under no obligation to participate in this research. If you decide to participate, you may withdraw your consent at any time without penalty.

If you decide to participate, please sign the following consent form. I will provide you with a summary of the research findings within two months of the completion of this project.

If you have any questions, concerns, or complaints about this project you may contact Mr. Michael Baker at bakerm38@myumanitoba.ca , Dr. Rick Freeze at **Rick**.**Freeze**@umanitoba.ca , or the Human Ethics Coordinator at humanethics@umanitoba.ca .

Sincerely

Michael Baker
Bakerm38@myumanitoba.ca

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Appendix B: Effects of Multi-Sensory Environments: Perceptions from Teachers
Note: Stephenson, J., & Carter, M. (2011). The Use of Multisensory Environments in Schools for Students with Severe Disabilities: Perceptions from Teachers. Journal of Developmental and Physical Disabilities, 23(4), 339-357. Was consulted when comprising the title and questions.

QU: What are educators' perceived effects of MSEs in Manitoba schools (K-12)*?*

Questions for Interview One

How long have you been teaching?
What is your current role in your school?
What subject(s) do you teach?
What is your area(s) of expertise?
What are your academic credentials?

How did you first hear about Multi-Sensory Environments?
Where is your MSE located?
When did your school first install them?
Why did they install them?
Were any specific group(s) of students targeted?
How was the decision to install them made? (Who was consulted?)
What was the purpose of installing a MSE?
How did you get information on MSEs? (How to use it, history of it, background)
Have you attended any professional development on MSEs?
Have you ever heard of the term 'Snoezelen'? What does it mean to you?

What role does Snoezelen play in your practice?
Are you aware of the foundational ideas of Snoezelen?
  How have those informed your practice?

Roughly how much did the MSE cost?
Have there been any additions or repairs to the MSE in the last 6 months? 1 year?

How do you understand MSE to work?
Have you, or any of your colleagues read any research of MSE?
What did you think the benefit of a MSE are?
  What do you think the disadvantages of a MSE are?
What is your MSE comprised of? (Technology, visual, lighting, use of space (excitement, calming?))

What model of MSE did you use? (dark room, white room….)?
> If you did not use a model, how did you conceptualize the space? What was your foundation?

How many students use the MSE per week? Per day?

Why do those specific students use the MSE?
How do your students use the MSE?
Do you use specific techniques? Instruction? Goal/Purpose?
What are you trying to achieve by allowing/recommending your students to use the MSE?
What type of equipment are in your MSE?
What is the specific benefit of each piece of equipment? (Bubble tube, lights, tactile, olfactory?)
How do you use your MSE?
Potential prompt; Passive Leisure? Structured environment for teaching skills, lessons or curriculum?
Do you use the MSE for assessment purposes? How so?
Have you witnessed short term effects of MSE?
Have you witnessed long term effects of MSE?

How do other staff at your school use the MSE?
Who is responsible for maintaining the MSE?
Do you and other staff who use MSE collaborate? Share information? Strategies?
What is the perspective of other staff, that you hear of, on MSE?
Does the opinions of others affect the way you use the MSE?
Have there been any problems in your experience using MSE?
Does your school culture promote the MSE? How so?

Questions for Interview Two

After reading the transcript of our pervious interview, is there anything you would like to add or mention?

What where the effects of our last interview on you? Thoughts? Worries? Change any practices? Make you think about anything specific?

Do you believe in inclusive education?
How would you describe Inclusive Education?
Are there limits to inclusive education?
Do you believe inclusive education has an end goal? What does it look like?
Why is inclusive education important?
 What role does inclusion play in your MSE?

How do your beliefs about inclusion inform your use of the MSE?
Are there limitations to inclusive education when applied to a MSE?
What inclusive strategies are employed in your use of the MSE?

Have you taken any courses or professional development on inclusive education?

What did you learn that you have applied into your practice?
Have you read any research on Inclusive Education?
How does inclusive education look for students with disabilities (exceptionalities) in your school?

How has your school changed, because of inclusive education, in the last 2 years, 5 years?
Does your administration discuss inclusive education? (staff meetings, 1 on 1 conversations, divisional collaboration or professional development)
What types of initiatives have you or your school taken in the promotion of inclusive education?
Have you or any staff given a presentation, PD on MSE or sensory learning?
Are there any areas that you would like your school or division to be more inclusive in?

What other students use the MSE? How do they use it? When? To do what?
Why do only students with disabilities (exceptionalities) use the MSE?
Have you ever thought about the idea of the MSE being open to everyone?

Other than yourself, what other staff are involved with the MSE?

What role does Snoezelen play within inclusive education?

How accessible are research or books on MSE?
Are there any areas of research that are troubling? Confusing?

What would help you to develop your understanding or use of MSE?

Do you have manuals, policies or procedures that govern the use of the MSE?
Would these be helpful, and in what way, if they did exist?
Do parents know their children use a MSE?
How did that conversation go?
What was their perspective on their child's use of MSE?
To what extent are the parents currently involved in the MSE programming?
  Prompt: If not, can you tell me the reasons parents were not informed?
Would you recommend the installation and or use of MSE to others? Staff, schools? Why? Why Not (Explain)

Would you promote further development of the MSE at your school? What would you add? Change?

Appendix C: Email Recruitment Scripts for Potential Participants

To Whom It May Concern

My name is Michael Baker (Graduate Student) and I am conducting a research project for my Master's Thesis in inclusive education. My study will explore *educators' perceived effects of Multi-Sensory Environments in Manitoba schools (K-12).* This research project will consist of two semi-structured interviews of educators, clinicians or administrators who use Multi-Sensory Environments, approximately 45 minutes to 90 minutes in length, two weeks apart, and may be conducted in person or on the telephone. The interview will focus on the uses of Multi-Sensory Environments and the educators' perceptions surrounding the use, benefits, shortfalls etc. of Multi-Sensory Environments. Participants will have an opportunity to review their transcript of each interview. At that time, participants can make changes, edit and provide explanation to a thought/topic within the transcript.

This project will help shed light on this emerging area in education in Manitoba. This project may also be used to inform my Ph.D. and any other published articles or presentations. The study has been approved by the Education Nursing Research Ethics Board at the University of Manitoba.

 I wanted to touch base with you and to discuss next steps should you be interested in participating. If you are interested, please email or call me at the address/phone number below.

Please find attached a more detailed information and consent letter, which I will require your signature to proceed. Please don't hesitate to let me know if you have any questions.

Sincerely

Michael Baker
Bakerm38@myumanitoba.ca

If you have any concerns or complaints about this project you may contact Mr. Michael Baker at bakerm38@myumanitoba.ca , Dr. Rick Freeze (advisor) at **Rick**.**Freeze**@umanitoba.ca or the Human Ethics Coordinator at humanethics@umanitoba.ca .

Appendix D: Consent Letter for Participant

Research Project Title: Multi-Sensory Environments: A Qualitative Exploration

Researcher: Mr. Michael Baker (Graduate Student: Bakerm38@myumanitoba.ca)
Advisor; Dr. Rick Freeze (Rick.Freeze@umanitoba.ca)

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you a basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully.

The study has been approved by the Education Nursing Research Ethics Board at the University of Manitoba.

I agree to take part in the study, Multi-Sensory Environments: A Qualitative Exploration

I understand that my participation will involve:
- o 2 semi-structured interview for approximately 45 minutes to 90 minutes each time.
- o The interviews will be about 2 weeks a part.
- o A copy of each interview will be provided to you transcribed for you to read and edit. I anticipate that this will take you about 15-30 minutes for each transcript.

- I understand that names will not be identified in any report or presentation that may arise from the study.
- I understand no inducement will be given for participation.
- I understand that the findings of this study may be presented to academic audiences (including workshops and conference presentations, reports, to inform my Ph.D., referred/non-referred journal articles).
- I understand that there are no repercussions for (non-) participation.
- I understand that the University of Manitoba may look at the research records to see that the research is being done in a safe and proper way.
- I understand that interview transcripts will be available only to the researcher and advisor (Dr. Rick Freeze) or transcription professional. Pseudonyms will be used for participants in all written records generated by the research, and consent forms will be housed in a separate location from the data, from which all identifiers will be removed as soon as the interview is transcribed. Data will be stored in a office on a password-protected computer, and relevant project forms will be stored in a locked safety box accessible only to the researcher. All data from the project will be destroyed within 5 years of study completion (Jan 1, 2024).

- I understand that a summary of the findings of the study will be sent to me via email or in-person within two months of the conclusion of the project.

The University of Manitoba may look at my research records to ensure that this study was conducted in a safe and proper way.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researcher responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

Participants Signature: _____
Researcher Signature: _____
Date: _____

If you have any concerns or complaints about this project you may contact Mr. Michael Baker at bakerm38@myumanitoba.ca , Dr. Rick Freeze at **Rick**.**Freeze**@umanitoba.ca or the Human Ethics Coordinator at humanethics@umanitoba.ca .

Sincerely

Michael Baker
Bakerm38@myumanitoba.ca

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Appendix E: Survey

Research Project Title: Multi-Sensory Environments: A Qualitative Exploration
Researcher: Mr. Michael Baker (Graduate Student: Bakerm38@myumanitoba.ca)

Advisor: Dr. Rick Freeze (Rick.Freeze@umanitoba.ca)

This consent form, is only part of the process of informed consent. It should give you a basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully.

I agree to take part in the study, Multi-Sensory Environments: A Qualitative Exploration

I understand that my participation will involve:
- One 5 question survey

- I understand that names will not be identified in any report or presentation that may arise from the study.

- I understand no inducement will be given for participation.

- I understand the findings will be used for the principal investigators (Michael Baker) Master's Thesis

- I understand that the findings of this study may be presented to academic audiences (including workshops and conference presentations, reports, to inform my Ph.D., referred/non-referred journal articles).

- I understand that there are no repercussions for (non-) participation.

- I understand that the University of Manitoba may look at the research records to see that the research is being done in a safe and proper way.

- I understand pseudonyms will be used for participants in all written records generated by the research, and consent forms will be housed in a separate location from the data, from which all identifiers will be removed. Data will be stored in the principal investigators home office on a password-protected computer, and relevant project forms will be stored in a locked safety box accessible only to the researcher. All data from the project will be destroyed within 5 years of study completion (Jan.1 2024).

- I understand this study has been approved by the Education Nursing Research Ethics Board (ENREB) at the University of Manitoba.

Your completion of this survey indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researcher responsibilities. You are free to withdraw from the study at any time, up until publication, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

1. How many Multi-Sensory Environments are currently being used in your school division?

2. If you can provide specifics, how many are in use at the elementary and secondary level?

3. Who was involved in the development of the Multi-Sensory Environment?

4. How would you best describe the demographic of students using the Multi-Sensory Environments?
a) Primarily students with Profound Intellectual and Multiple Disabilities.
b) Primarily students who have a disability of some form (learning, physical and or cognitive/developmental).
c) All students use it in a variety of ways and classes to meet both personal, sensorial and curricular outcomes.

5. Does your school division or school(s) currently have policy, procedures or manuals that govern or regulate the use of the Multi-Sensory Environment?

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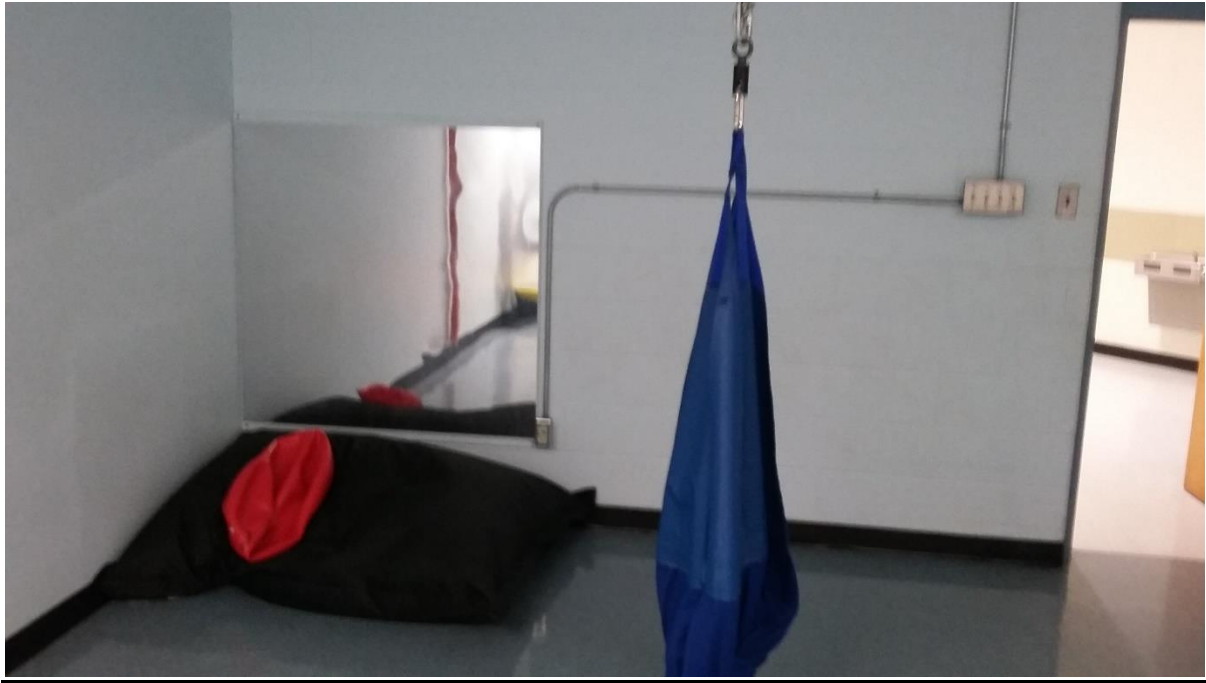**Appendix F: Photograph of MSEs in Manitoba Schools K-12**

Research Project Title: Multi-Sensory Environments: A Qualitative Exploration
Researcher: Mr. Michael Baker (Graduate Student: Bakerm38@myumanitoba.ca)

Advisor: Dr. Rick Freeze (Rick.Freeze@umanitoba.ca)

UNIVERSITY OF MANITOBA   Research Ethics and Compliance

PROTOCOL APPROVAL

TO: **Michael Baker**   **(Advisor: Rick Freeze)**
           Principal Investigator

FROM: **Joseph Gordon, Chair**
            Education/Nursing Research Ethics Board (ENREB)

Re: **Protocol #E2018:069 (HS22043)**
            What are educators' perceived effects of Multi-Sensory Environments in
            Manitoba schools (K-12)?

Effective: September 27, 2018   **Expiry:** September 27, 2019

Education/Nursing Research Ethics Board (ENREB) has reviewed and approved the above research. ENREB is constituted and operates in accordance with the current *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans.*

This approval is subject to the following conditions:

1. Approval is granted only for the research and purposes described in the application.

2. Any modification to the research must be submitted to ENREB for approval before implementation.

3. Any deviations to the research or adverse events must be submitted to ENREB as soon as possible.

4. This approval is valid for one year only and a Renewal Request must be submitted and approved by the above expiry date.

5. A Study Closure form must be submitted to ENREB when the research is complete or terminated.

6. The University of Manitoba may request to review research documentation from this project to demonstrate compliance with this approved protocol and the University of Manitoba *Ethics of Research Involving Humans.*

Funded Protocols:
- **Please mail/e-mail a copy of this Approval, identifying the related UM Project Number, to the Research Grants Officer in ORS.**