Designed Classroom Space:

The Influence of Teachers’ Philosophies of Education on Their Classroom Design

By

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A research paper submitted in conformity with the requirements for the degree of Master of Teaching
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Abstract

This Master of Teaching Research Paper presents an investigation of the extent to which a sample of elementary teachers’ philosophies of education influence their decision-making on their design and use of classroom space, as well as their perceived impact of these decisions on students’ classroom learning experience. Explored with both literature and qualitative research conducted through interviews, it was discovered that maintaining a healthy and safe space attributes to a level of comfort which influences a student’s ability to learn. Other components such as layouts for classroom interaction, wall display and organization of resources are reflective of a teacher’s philosophy of education. Ultimately, the participants attempted to create classrooms with a home-like feel while also being able to facilitate their philosophy of education.

Key Words and Phrases
Classroom Design
Space
Classroom
Physical environment of the classroom
Impact on student learning
Philosophy of Education
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TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>2</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>3</td>
</tr>
<tr>
<td><strong>Chapter One: INTRODUCTION</strong></td>
<td>6</td>
</tr>
<tr>
<td>Introduction to the Research Study</td>
<td>6</td>
</tr>
<tr>
<td>Purpose of the Study</td>
<td>7</td>
</tr>
<tr>
<td>Research Questions</td>
<td>7</td>
</tr>
<tr>
<td>Background of the Researcher</td>
<td>8</td>
</tr>
<tr>
<td>Overview</td>
<td>9</td>
</tr>
<tr>
<td><strong>Chapter Two: LITERATURE REVIEW</strong></td>
<td>10</td>
</tr>
<tr>
<td>Facility Services</td>
<td>10</td>
</tr>
<tr>
<td>Size and Space for Flexibility</td>
<td>13</td>
</tr>
<tr>
<td>Student Dynamics and Interaction</td>
<td>13</td>
</tr>
<tr>
<td>Storage and Organization</td>
<td>16</td>
</tr>
<tr>
<td>Display Space</td>
<td>16</td>
</tr>
<tr>
<td>Reggio Emilia</td>
<td>18</td>
</tr>
<tr>
<td>Resourceful Spaces</td>
<td>19</td>
</tr>
<tr>
<td>Technology</td>
<td>20</td>
</tr>
<tr>
<td>Individual Student Needs</td>
<td>21</td>
</tr>
<tr>
<td>Atmosphere</td>
<td>22</td>
</tr>
<tr>
<td><strong>Chapter Three: METHODOLOGY</strong></td>
<td>24</td>
</tr>
<tr>
<td>Procedure</td>
<td>24</td>
</tr>
<tr>
<td>Instruments of Data Collection</td>
<td>25</td>
</tr>
<tr>
<td>Participants</td>
<td>26</td>
</tr>
<tr>
<td>Data Collection and Analysis</td>
<td>27</td>
</tr>
<tr>
<td>Ethical Review Procedures</td>
<td>27</td>
</tr>
<tr>
<td>Limitations</td>
<td>28</td>
</tr>
<tr>
<td><strong>Chapter Four: FINDINGS</strong></td>
<td>29</td>
</tr>
<tr>
<td>Healthy, Safety and Cleanliness</td>
<td>29</td>
</tr>
<tr>
<td>Clean and Tidy</td>
<td>29</td>
</tr>
<tr>
<td>Fire and Safety</td>
<td>30</td>
</tr>
<tr>
<td>Size and Space for Flexibility</td>
<td>31</td>
</tr>
<tr>
<td>Student Dynamics and Interaction</td>
<td>31</td>
</tr>
<tr>
<td>Storage and Organization</td>
<td>33</td>
</tr>
<tr>
<td>Display Space</td>
<td>34</td>
</tr>
<tr>
<td>Resourceful Spaces</td>
<td>35</td>
</tr>
<tr>
<td>Financial Support</td>
<td>35</td>
</tr>
<tr>
<td>Technology</td>
<td>35</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td>Individual Student Needs</td>
<td>36</td>
</tr>
<tr>
<td>Home</td>
<td>38</td>
</tr>
<tr>
<td>Reading Area</td>
<td>38</td>
</tr>
<tr>
<td>Decorations and Home</td>
<td>38</td>
</tr>
</tbody>
</table>

**Chapter Five: DISCUSSION** | 42
- Discussion | 42
- Health, Safety and Cleanliness | 43
- Size and Space for Flexibility | 43
- Resourceful Spaces | 44
- Home | 45
- Research Implications and Recommendations | 46
- Further Study | 48

**REFERENCES** | 49

**APPENDICES** | 52
- Appendix A: Letter of Consent for Interview | 52
- Appendix B: Letter of Consent | 53
- Appendix C: Interview Questions | 54
Designed Classroom Spaces:

**The Influence of Teachers’ Philosophies of Education on Their Classroom Design**

**Chapter One: INTRODUCTION**

**Introduction to the Research Study**

A student’s level of success largely depends on the experiences shaped by adults, peers and the physical environment where he or she learns (Cannon Design, VS Furniture, Bruce Mau Design, 2010). In *The Key Elements of Classroom Management*, Joyce McLeod, Joyce Fisher and Ginny Hoover (2003) explain that it is important for teachers to “make every inch of classroom space count in order to have a rich and inviting classroom environment because… the richness of student’s experiences are enhanced or diminished by their surroundings” (p. 3). Some of the questions and considerations that teachers account for when designing their classrooms include the use of learning centres, the placement of materials, desk arrangements, and environmental preferences such as lighting, temperature and noise level (Shalaway, 1997). While we know that space can impact student’s academic well being, we know less about how a teacher’s philosophy of education impacts their decision-making around how they use classroom space as a purposeful medium for teaching and modeling important lessons and concepts.

With this context in mind, the purpose of my research was to learn how a sample of elementary teachers’ philosophies of education influence their decision-making on their design and use of classroom space; and the perceived impact these decisions have on student’s classroom learning experiences.
Purpose of the Study

The relationship between people and physical space is interdependent. Teachers are given classrooms where they are responsible for creating educational environments that determine the experiences of the teacher and the students (McLeod et al., 2003). As a classroom designer, the teacher makes choices about the organization of the space in attempts to effectively teach, manage the classroom and accomplish the goals of education. The varied ways that teachers design their use of classroom space is likely impacted by their philosophy of education. Teachers may benefit from the opportunity to reflect on how central components of their philosophies of education are and are not accounted for in their use of classroom space. Students may benefit from their teachers thoughtful attention to how they have designed classroom space and the potential modifications they might make because of the potential impact physical spaces have on learning.

Research Questions

The central question guiding my research is: How do elementary teachers’ philosophies of education influence their decision-making on their design and use of classroom space? What do they perceive to be the impact of these decisions on students’ classroom learning experience? Some of my sub questions are:

1. What are central premises of teacher’s philosophies of education?
2. How are teachers’ philosophies of education accounted for in their design of classroom space?
3. What range of factors impact the extent to which teachers can design their classroom spaces in ways that align with their philosophies of education?
4. What do teachers perceive to be the impacts of their design decisions for classroom space on students’ learning experience?

**Background of the Researcher**

From a young age I have observed my parents discuss thoughts about architecture and how to design spaces. My father is a teacher as well as a carpenter. I continue to observe him designing and building structures to better serve our family needs. My mother enjoys decorating spaces to be aesthetically pleasing. I became involved in conversations about creating physical spaces when designing our family home. Being artistic and organized, I enjoy purposefully designing and decorating spaces for people and events. I became hyper aware of the impact physical spaces have on me during my high school and undergraduate studies. Seeking alone time while at school was crucial for gathering and expressing myself before being re-exposed into spaces full of people. I grew to value physical divides where I control who and what can enter. Being aware of my surroundings and environment I think about how space affects people and how people affect space. As a Drama major at Queen’s University, I explored these ideas in relation to set and theatre design. From closets to stadiums, I am fascinated by the way spaces manipulate the way people behave in and with them and vice versa. In my final undergraduate year I took a class about generating space that fuelled my passion and stimulated my mind regarding purposeful and intentional design choices. Working in construction and designing spaces has allowed me to execute my considerations about generating spaces. As a student and teacher candidate, I continue to encounter different classroom spaces acknowledging that each is different from the next depending not only on the given architecture but also by the people within it. In efforts to combine my
passions of teaching, learning and space, I sought to understand how and why teachers intentionally design their classrooms the way they do, and to what extent their philosophy of education influences their design.

**Overview**

Chapter One includes the introduction and purpose of the study, the research questions, as well as how I came to be involved in this topic and study. Chapter Two contains a review of the literature on educational space. Chapter Three provides the methodology and procedures used in this study including information about the participants, data collection instruments, and limitations of the study. Chapter Four identifies the participants in the study and describes the data as it addresses the research questions. In conclusion, Chapter Five includes limitations of the study, conclusions, recommendations for practice, and further potential inquiries to contribute to the literature and for my own practice as a beginning teacher.
Chapter Two: LITERATURE REVIEW

There is much to be said about the best way to design a classroom space. In their book *Classroom Spaces That Work*, Marlynn K. Clayton and Mary Beth Forton teach how to create an effective classroom space with practical ideas for: arranging furniture, establishing pathways, selecting and organizing materials, eliminating clutter, storing supplies, creating meaningful displays, setting up a meeting area, accommodating special needs, making the space healthy, keeping the classroom clean (2001). There are many components, which are part of creating a classroom space, each requiring thorough consideration of practicality, aesthetics and preference. There is much research explaining, justifying and promoting certain ways to create and maintain these areas.

**Facility Services**

One of the important components of creating a space is ensuring and maintaining it to be safe, clean and healthy. In fact, the Toronto District School Board’s (TDSB) Value Policy and Occupational Health and Safety statements include striving for “learning environments that are safe, nurturing, positive and respectful” (Toronto District School Board, 1998, p. 1). Although the term “environments” is general, suggesting both physical and felt atmospheric surroundings, the cleaning and safety of the physical classroom design does influence this sought after, valued, environment, and vice versa. To achieve this, the Facility Services department of the Toronto District School Board (TDSB) has five divisions: Administration, Construction, Design, Facility Operations, and Sustainability (Toronto District School Board, 2014, Facility Services). Being responsible for TDSB properties and buildings, each division also has some involvement with the classrooms themselves. Administration responds to facility inquiries and issues,
and is responsible for communicating between appropriate parties (Toronto District School Board, 2014, Facility Services). The Construction division constructs, alters, decorates, and repairs TDSB buildings in efforts to sustain, maintain and preserve existing buildings (Toronto District School Board, 2014, Facility Services). The Design division is responsible:

“For energy retrofit projects and the design of new schools, additions, renovations, site improvements and the replacement of roofs, windows, heating, ventilation and air conditioning equipment and electrical equipment including public addresses and fire alarm systems. This team directs and oversees the work of consulting design professionals and produces a wide range of technical documents, including construction drawings and specifications” (Toronto District School Board, 2014, Facility Services, para. 5).

The Design division makes decisions that directly influence the spaces where teachers work when designing their classroom spaces. The Facility Operations division ensures that the TDSB facilities comply with legislation, regulations and codes. Finally, the Sustainability division implements the TDSB Environmental Policy (Toronto District School Board, 2014, Facility Services). It is clear that each division has some responsibility towards attaining environmentally sustainable facilities. A major part for achieving this requires the implementation of Fire Prevention guidelines. From modifying materials so that they are non-combustible, displaying materials that cover only 20% of the walls within the corridors, as well as, removing combustibles (e.g., mobiles) from the ceiling, the caretaking and trades staff must be alert and promptly address all hazardous situations within the school (Toronto District School Board, 2013). Teachers must abide by these guidelines when designing their classroom space to prevent fires and ensure workplace safety.
Besides fire prevention and architectural design, the health and safety of a space can also be influenced by the classroom’s level of cleanliness and tidiness. This is a shared responsibility with the caretakers, teachers and students in Canada. In his articles, *The Cleaning of One’s Heart and Mind*, Virgilio Manzano’s explains:

“The types of school cleaning used in the schools surveyed included professional cleaning, student cleaning, and hybrid. The student cleaning type is used because of the lack of fun and in some cases cleaning is considered an import part of purifying one’s heart and mind. Other schools, just like in other countries, clean the school surroundings because of hygienic reason[s]” (2013, p. 69).

This perspective is an interesting one as Manzano suggests the spiritual benefits for students in performing the act of cleaning, as oppose to simply benefiting from an environment that is clean. While this belief is not shared in the average mainstream Canadian classroom, cleaning for hygienic and safety purposes is evident and required.

According to Abraham Maslow’s Hierarchy of Needs, safety is one of the foundational needs that motivate human behaviour (McLeod, 2014). In his description of Maslow’s Hierarchy of Needs, Saul McLeod, connects the need for safety to education relating that, “students need to feel emotionally and physically safe and accepted within the classroom to progress and reach their full potential” (2014, p. 5). To produce a sense of physical safety, a space should protect users from the elements, provide security, order and stability (McLeod, 2014). Besides creating a safe environment through organization and tidiness, another component of safety includes the level of security at school. TDSB has many policies and procedures for ensuring the safety of school members, however, physical spatial efforts include locking classroom and exterior doors (Toronto District School Board, 2009). In her contribution to *EducationWorld, Creating a Safe Classroom*
Environment, Dr. Linda Dusenbury prescribes that “students need to feel safe in order to learn” and that in relation to the physical space, teachers should:

“First, be sure the classroom is clean, orderly, and inviting… Arrange your classroom so that you have all the resources you need… right where you can find them, within easy reach… Make it easy to supervise your students… Organize the physical space of your classroom for movement and interaction” (2012, p. 1).

Each of Dusenbury’s suggestions can be elaborated upon providing theories and opinions regarding design, appropriate resources, storage solutions, tools and layout preferences. In essence, maintaining a clean and tidy classroom serves aesthetic purposes as well as health and physical safety necessities.

**Size and Space for Flexibility**

No matter the size or shape of a classroom space it must be flexible to accommodate the nature of education as it changes and develops people’s skills, knowledge and interests in a variety of ways. There are a variety of education approaches and theories on pedagogy, all of which require attention to the classroom space and environment.

**Student Dynamics and Interaction**

Many of today’s classroom practices are pedagogically rooted in psychologist Lev Vygotsky’s ideas about development and teachers continue to implement group and peer interactions based upon this work. Vygotsky explains in his paper *Mind in Society*:

“We propose that an essential feature of learning is that it creates the zone of proximal development; that is, learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers. Once these processes are internalized, they become part of the child’s independent developmental achievement” (1978, p. 90).
This theory is to say that peer interaction is foundational to a child’s development. He continued to note that children scaffold each other, modify tasks and assist one another to complete tasks, in addition to modeling behaviour (Tharp & Gallimore, 1988).

Developmental psychologist, Jean Piaget, and educational psychologist, Benjamin Bloom, defined similar theories of the learning and understanding processes. It remains true that students come to school with a variety of social, emotional and educational backgrounds, developing at different rates and in different ways (Bailey, 2008). Patrick Bailey suggests a balance between ‘student centred learning’ and ‘teacher centered teaching’ (2008). He acknowledges that “the learning environment is now so complex that [it] is simply unreasonable” to expect teachers to be good at, and know everything, and that “the pedagogic evidence is overwhelming that students are extremely diverse in their skills, weaknesses, and learning styles” (Bailey, 2008, p. 74). Bailey reminds readers that teachers are also diverse in their abilities and areas of expertise and that ‘student centred learning’ should not replace, but be implemented in addition to “identifying those strengths and weaknesses, and building our teaching around the qualities of our teachers” (2008, p. 74). Needless to say, to facilitate this pedagogical balance the classroom space must have design qualities that allow for flexibility and change as opposed to a rigid structure.

In the Place and Space in the Design of New Learning Environments study, the first guiding principle for the development of teaching and learning facilities supports that:

“New learning environments need to allow for multi-functionality. This includes both teacher-centred and student-centred approaches… Student-centred and collaborative approaches to learning, as well as negotiated assessment, will
increase the variation in student activity in formal classes” (Jamieson, P., Fisher, K., Gilding, T., Taylor, P., & Trevitt, A.C.F., 2000, p. 6).

For students and teachers to engage in the aforementioned educational experience the space must allow for teachers to teach to students and students to work with one another as well as having the space to work individually. In addition to accommodating all learners, Kim Hassell adds, “the space should be large enough so it can be configured to accommodate a number of learning activities” (2011, p. 1).

Many teachers implement learning centres, especially in the primary grades. While one area of the room, usually with a carpet and access to a chalkboard or whiteboard, acts as a meeting place for whole group instruction and discussion, there are other areas in the classroom with designated focuses, themes or activities. Anthony Fredericks summarizes by saying:

“Learning centres are usually designed to offer a variety of materials, designs, and media through which students can work by themselves or with others to operationalize the information learned in the classroom. Centres are designed to enhance the learning of concepts, skills, themes, or topics” (2005, p. 1).

Individually, a learning centre may aim to develop skills such as writing, building or mathematics, or each station can explore themes such as the water cycle or an arts-based learning centre. After modeling, explanations and practice, students circulate through the centres developing their skills and content knowledge. Throughout the year, centres change in skill, task and theme. Learning centres promote social skills, are hands-on and provide opportunities for active engagement (Grey, 2011). There are numerous benefits to learning centres yet setting them up in your classroom is highly determined by your classroom space. Centre areas usually accommodate about five students, but the size and organization of the area will determine how many students can work there comfortably.
Each centre also has materials needed organized with storage solutions so that student’s have access to what they need to learn and develop skills. Beyond centres, materials and tools for learning and teaching that are easily accessible eliminates the obstacle of access to recourses, which may inhibit one’s motivation and educational experience.

**Storage and Organization**

Finding a balance between neatly stored materials and tools, while also being accessible when needed can prove to be difficult but important goal to attain in a classroom space. Classrooms are used for a wide variety of activities needing various resources and tools and “because of the need for multi-functionality within a class session, it must be possible to quickly re-organize the available site for a particular activity” (Jamieson, P., et al, 2000, p. 7). While any space manager looks for ways to store its contents it is important to note the repercussions of storage and organization beyond keeping items off the floor for safety. In their article *Rules and Rituals: Tools for Creating a Respectful, Caring Learning Community*, Horsch, Jie-Qi and Nelson (1999) emphasize:

> “When organized thoughtfully, the classroom environment itself can serve as a teacher. In the Responsive Classroom approach, the organization of the classroom is intended to maximize children’s independence at the same time that it facilitates their interactions; the physical environment is also suppose[d] to reflect the common culture that the teacher and students build together over time. In a typical Responsive Classroom, the furniture is arrange[d] to create well-defined areas that permit children to work in a variety of configurations: alone, with partners, in small groups, and as a whole group” (para. 12).

Organizing a classroom space may seem like a time consuming endeavour at the beginning of the year, but it undeniably affects the students and teachers within the space on a daily basis for the entirety of the school year.
Display Space

From hieroglyphics to writing computer code, using the walls to display information is a commonly used visualization for teaching and learning. Classroom walls and surfaces “could be used to provide display areas for subject material or products of research activity, generating a sense of a disciplinary community; or to provide students with whiteboard space for planning, recording and other collaborative activities” (Jamieson, P., et al, 2000, p. 7). While it may seem easy to display student work, anchor charts, posters, photos and visual aids on the walls, the challenge comes with choosing purposeful pieces for display while balancing aesthetics without over stimulation and clutter. Howard Gardner notes that wall displays cater to visual spatial learners but “one need not to encourage the use of spatial intelligences; rather one should make imaginative pedagogical use of the spatial arrays that are available” (Cannon Design, et al, 2010, p. 64). That is to say, wall displays should not be the only means for learning and teaching as all multiple intelligences must be facilitated, but when designing wall spaces for learners who are visual spatial, be sure to do so critically thinking of the purpose and how it enhances the learning experience. In her article, Consider the Walls, Patricia Tarr analyzes the commercially produced decorations of classrooms and ultimately encourages “teachers to step back and critically examine the quality and quantity of commercial materials on their walls to determine whether they actually contribute to children’s learning or whether they ultimately silence children” (2004, p. 92). As spaces are inevitably impressionable on their users, it is important to utilize this space positively. Sarika Bansal recalls studies that suggest:

“Extremely busy walls have proven to be distracting, though posters with animals, nature, or inspirational quotes can have a positive effect on students. However,
objects that subtly signal that certain groups do not belong (e.g., posters of leaders who are all white men) can have a harmful effect on students that do not belong to that group” (Bansal, 2015, p. 1).

The walls of a classroom can be distracting to students but it can also be tastefully used to positively effect students.

Another way wall design influences students is through presenting their work. The Third Teacher, a book with 79 ways to use design to transform teaching and learning, features Display Learning, emphasizing that “posting student work, both current and past, up on the walls tracks progress in a visible way” (Cannon Design, et al, 2010, p. 65). As education strives to progress and develop student’s skills and knowledge, acknowledging the continuum of learning is both reflective and encouraging by visibly displaying the learning process. As technology has become increasingly accessible for students, Trung Le elaborates the need for advanced wall displays,

“We’re seeing the things kids are producing, and they aren’t just two-dimensional and static anymore. This new generation is creating films and multimedia productions. With technology getting less and less expensive, multi-media presentation display is affordable – and essential” (Cannon Design, et al, 2010, p. 65).

The ever-changing technological tools for presenting knowledge can be incorporated into a teacher’s wall display. Although Le highlights that technology costs are decreasing, many school boards are unable to afford these tools, which limits the implementation of multi-media wall displays. As mentioned before, fire prevention guidelines mandate that classroom contents be non-combustible. Other limitations for displaying on wall space include the various approaches for attaching and adhering to the walls.
**Reggio Emilia**

The Reggio Emilia educational approach to teaching and learning believes that the environment is the third teacher (Edwards, C., et al, 1998). Founded by Loris Malaguzzi, in Reggio Emilia, Italy, the Reggio Emilia approach to teaching and learning values space a key influence in a the educational experience. The Reggio Emilia approach believes that:

“In order to act as an educator for the child, the environment has to be flexible: it must undergo frequent modification[s] by the children and the teachers in order to remain up-to-date and responsive to their needs to be protagonists in constructing their knowledge” (Edwards, C., Gandini, L., & Forman, G., 1998, p. 177).


The Reggio Emilia approach thoughtfully considers social constructivism and encourages the development of unique spaces that invite children to explore (Edwards, C., et al, 1998). Being a thoroughly developed approach Reggio Emilia has many critiques and suggestions about the classroom space. In short, Reggio Emilia classrooms have a lot of natural light, order and natural, purposeful and accessible materials for students to explore, collaborate and communicate their understandings (An Everyday Story). In 1984, Malaguzzi explains to Gandini,

“We value space because of its power to organize, promote pleasant relationships among people of different ages, create a handsome environment, provide changes, promote choice and activity, and its potential for sparking all kinds of social, affective, and cognitive learning. All of this contributes to a sense of well-being and security in children. We also think as it has been said that the space has to be a sort of aquarium that mirrors the ideas, values, attitudes and cultures of the people who live within it” (Edwards, C. et al, 1998, 177).
The Reggio Emilia approach considers the space to be a fundamental influence to a student’s learning.

**Resourceful Spaces**

**Technology**

Today’s 21\textsuperscript{st} century learner engages with various forms of technology on a daily basis. Focal point 75 of *The Third Teacher* declares that “new technology brings with it new teaching opportunities” and the designed learning environment should “allow teachers to modify their methods and expectations as technology changes” (Cannon Design, et al, 2010, p. 233). Integrating technology in education has become irresistible, however, it is not easily accomplished. Noel and Joe Bitner explore factors limiting successful implementation of technology in their article *Integrating Technology into the Classroom*. Many teachers have fear, anxiety and concerns about using technology and some teachers lack training for using technology (Bitner, 2002). Funds, time and space are spent to physically bring technology into education. To bring computers, tablets, mobile devices, projectors, interactive whiteboards and the future technologies, into the classroom space they require energy sources, most often electricity, which causes a classroom space to be modified. The quality of technology may also factor into a teacher’s level of technological implementation into their practice. “When a problem occurs in class, it is difficult, if even possible, to ignore 30 or more students and concentrate solely on restoring a technology resource breakdown” (Bitner, 2002, p. 98). The pressure for teachers to use technology should synonymously include support and assistance for “teachers through the difficult change process necessary to use and integrate technology into the curriculum” (Bitner, 2002, p. 99). This support may help
DESIGNED CLASSROOM SPACE

teachers and students feel more comfortable with using technology for teaching and learning but regardless, classroom space designers will need to consider physical places for these technologies without adding clutter to the space with devices and wires. Technological devices in the classroom can be both stationary and mobile which adds to a teacher’s consideration when designing his/her classroom space. One cannot be achieved without the other.

**Individual Student Needs**

Additionally, students who use assistive technologies such as wheelchairs and hearing aids are also considered when a teacher designs the layout of the classroom space to achieve an inclusively accessible learning environment. Correspondingly, teachers and students have individual needs, which influence their development, teaching and learning. Universal Design is a term for the proactive consideration of strategies for accommodating students with various needs (DO-IT, 2012). Universal Design aims to provide all students with a “fair education”, being that all students have specific needs that require specific resources, tools and environmental accommodations for learning successfully. Having ramps, wide pathways and other readily available accommodations help a student to feel comfortable, minimizing obstacles for learning in the classroom. Design company Herman Miller (2007) notes that comfort, being a physical and psychological concept, “is not always a quantifiable phenomenon. But we know that when people are uncomfortable, they are distracted” (p. 2). Herman Miller continues, “in a sense, a comfortable environment clears the mind of the distractions that impede the work for learning that needs to be done” (2007, p. 3). To accommodate students’ diverse needs for a comfortable space with limited distractions, designers, teachers and students
must consider how environmental accommodations can fulfill these needs. For example, people with Autism Spectrum Disorder have heightened senses, which may cause a person to perceive background conversations as very loud and distracting (Evans, 2014). An accommodated workspace for this person may include “providing quiet workstations and options for dimmer lighting or an escape room where they can get away for short breaks when they require quiet time” (Evans, 2014, para. 7). To facilitate “fair education” for all students, teachers may need to modify their space in addition to having resources accessible for their diverse student needs.

**Atmosphere**

Similar to the physical and felt environment, the design of a classroom space can promote and suggest certain values. Patricia Tarr claims “classroom environments are public statements about the educational values of the institution and the teacher” (2004, p. 89). A teacher makes choices to design the “arrangement of space – including desks, tables, materials available, and what is displayed on the walls” and this “conveys messages about the relationship between teaching and learning, the image of the child held by the teacher, and the expectations for behaviour and learning within that setting (Tarr, 2004, p. 89). As the designer of the classroom layout and chooser of the classroom’s contents, the teacher’s values and expectations are subliminally promoted within the space. Previously mentioned, the TDSB values classroom environments that are “safe, nurturing, positive and respectful” (1998, p. 1). One of the ways teachers cultivate this environment, is with the ownership of a class animal or pet. The Toronto District School Board’s Animals in Classrooms policy states the board’s belief that “living things make an important contribution to education of students. Through keeping
animals young students learn about their needs and characteristics, and begin to recognize
the great variety of living things” while also “foster[ing] concern and respect for living
things” (Toronto District School Board, 2002, p. 1). Similar to the Reggio Emilia
approach, the TDSB agrees that nature and living things are valuable to students’
education.

Each teacher brings his/her own character, values and style to a classroom.
Although many classrooms share similar designs and resources, it is the designers and
users who bring the space to life.
Chapter Three: METHODOLOGY

Procedure

To explore how a sample of elementary teachers’ philosophies of education influence their decision-making on their design and use of classroom space and the perceived impact these decisions have on students’ classroom learning experience, I engaged in qualitative research. In John Creswell’s book *Qualitative Inquiry and Research Design* (2013) he describes qualitative research as the,

“Process of research as flowing from philosophical assumptions, to interpretative lens, and on to the procedures involved in studying social or human problems. Then, a framework exists for the procedures – the approach to inquiry, such as grounded theory, or case study research or others” (p. 44).

Qualitative research was suited for this topic because it allowed for meaning to be made from lived experiences regarding the phenomenon of physical space and its affects on teaching and learning. Using a qualitative research approach also created space for considering the social and cultural context of my presence as a researcher. In combination with reviewing related literature and by conducting my research through a qualitative structure, I sought to discover complex and detailed understandings of findings that cannot be easily measured without the voice of teachers and specific documentation such as pictures of their classroom spaces. My qualitative research included the perspectives and experiences of teachers who made conscious choices for designing their classrooms’ physical spaces. Being a phenomenological study, a study making meaning of the concept of the design of educational spaces, I presented teacher’s valuable lived experiences with designing their classrooms and the perceived influence this experience has on teaching and learning.
This chapter describes my criteria for participants and the guidelines and strategies used to ensure ethical procedures. This chapter also includes the strengths and limitations of my qualitative research. Additionally, this chapter also references the interview questions (Appendix A) and letter of consent documents (Appendix B).

**Instruments of Data Collection**

I conducted semi-structured one-on-one interviews with four participating teachers. In *Qualitative Inquiry and Research Design* (2013), Creswell explains that the interview is a one-way dialogue based on the researcher’s agenda leading the researcher to interpretations of information withheld from the interviewee (p. 163). The interviews were audio recorded and transcribed by myself digitally on the computer. Before the interviews were conducted, interviewees were given the questions to review at their leisure. The interviews were conducted in efforts to collect experiences and opinions about classroom design from teachers. Some examples of questions probing desired information are as followed:

1. Can you please speak to the dynamics of classmate interaction and how or if you have arranged the space to facilitate this? For example, do your students work independently, in small groups or whole group?
2. What do you make sure to include in your classroom space? What do you consider necessity and beyond necessity?
3. Comparing the various spaces you have designed, what have you noticed about the effect on students?
4. What are some challenges you face when arranging a space to suit teaching and various learning needs?
See Appendix B.

Participants

Providing valuable information, each of my four participants has his/her philosophies and experiences designing their classroom spaces. Each of my participants has been assigned pseudo names for confidentiality.

My first participant, Jamie, has a gift for creating aesthetically pleasing spaces. I was curious as to what influences her classroom design. She has taught in a public school board within mainstream classrooms, two portable spaces, and a century building. She has taught grades four, five, six, seven and eight. At the time of the interview Jamie was teaching grade eight in her tenth year as a teacher.

I recruited my second participant, Andy, after seeing hanging baskets, potted plants and a tree in her classroom. She has been teaching grades kindergarten to grade three for a public school board. At the time of the interview, Andy had taught for just less than twenty years and was teaching grade one.

Mackenzie, my third participant, was a child and youth worker for two years, the director of a pre-school for ten years, and has taught junior and senior kindergarten at an all girl independent school for seventeen years. At the time of the interview, Mackenzie taught junior kindergarten at an independent school that ascribes to the Reggio Emilia philosophy for primary education.

Teaching at the same all girl independent school as Mackenzie, my fourth participant was Bailey. Bailey taught French to grades nine, ten, eleven and twelve students for two years before teaching grades one, two, three and four at the independent school for five years at the time of the interview. During this time he was teaching grade
two for his second time. His space caught my attention having communal desk spaces, non-traditional classroom chairs and workspaces as well as areas for classroom pets.

**Data Collection and Analysis**

All interviews were recorded and then transcribed into documents on the computer. While transcribing I took note of the ideas and concepts mentioned by my participants as they showed relevance to my research question and significant for others to know in regards to classroom space. While coding interviews, I highlighted keywords and ideas and made note of the general themes as coordinated with my topic. As more ideas emerged, I began grouping them into families according to potential relationships. A few themes became more prominent throughout the coding when the participants addressed them. Although the themes are more general, they are supported by more specific subthemes strengthening the findings related to my research question.

**Ethical Review Procedures**

My experts agreed to participate in the study as recorded on the consent form proposed through the University of Toronto. The consent form was discussed and reviewed with each participant to ensure understanding of the study requirements and its purpose, before signed consent was given. Both the participants and myself, the researcher, each have a copy of the consent form. Through verbal communication and written in the consent form, participants were aware that they had the right to withdraw from the study at any time and raise their questions, comments and concerns. Participants were given the contact information of myself/the researcher, the research supervisor, and the course instructor if they wanted to discuss questions, comments and concerns. Participants were informed that their identities would remain anonymous and
pseudonyms would be assigned in the transcripts and research paper. Once interviews were digitally transcribed I sent the documents to the participants asking them to confirm whether the transcriptions were accurate portraying their intended meaning.

**Limitations**

The Masters of Teaching Research Project (MTRP) follows the requirements of the Master of Teaching program from the Ontario Institute of Studies in Education (OISE) at the University of Toronto. The MTRP is designed to help students develop an approach to teaching through inquiry based on thoughtful research responsive to student needs through a teaching focus (Kosnik, 2013, p. 2). According to the *Guidelines for Research Projects Master of Teaching (MTRPs) 2013-2014* document “the research will be qualitative (not quantitative) where [students] will interview two or three teachers who are strong (e.g. exemplary) in a particular area” (Kosnik, 2013, p. 3). Due to the MTRP restrictions, I could not use observations of the classroom spaces or children as part of my data collection. Knowledge of individual classroom spaces was simulated by questions regarding details I observed in the space. I could not interview anyone other than teachers. However, interviewing students could have allowed me to gain a broader perspective of students’ experience of specific design elements of their teachers’ classroom spaces. Future research on this topic would be enhances with the inclusion of student voices.
Chapter Four: FINDINGS

Overall, each participant expressed efforts and desires to make their classroom space feel, to some extent, like home. Creating this home-like environment required attaining a healthy, safe and clean space, which provided flexibility for change, and access to resources. The headings discussed in my literature review were all present in the interview data collected from my participants. Having said that, there are some sub-themes that also presented themselves. This chapter is structured around the original themes within the sub-themes being woven into the appropriate theme.

Health, Safety and Cleanliness

All participants agreed that caretakers or custodians play a crucial role in keeping the classroom spaces healthy and clean. However, each of my participants had cleaning responsibilities assigned to students on a rotation in efforts for maintaining a safe and clean space.

Clean and Tidy

Having a clean and tidy space is a shared responsibility of the teachers, students and caretaking staff. Jamie shared an experience of teaching in rotary system, moving to teach students in their homerooms. One class was “filthy, [and] unorganized” and having student’s items “strung across the dirty mat when I walked in, was enough to make me want to turn out and leave. That definitely affected me that year” (Interview, 2014). She continued, “I would take my teaching time and help them organize to clean it up so then you’re not starting the class off on a negative note” (Interview, 2015). She acknowledged that some people are not affected by disorganized spaces, but it influences her mood and attitude greatly and feels that it does the same for the majority of her students. Jamie and
Andy both spoke of spending time and effort cleaning their classrooms thoroughly, disinfecting surfaces, sweeping the floors and dusting in preparation for the school year. During this time of year Andy explores designs that allow caretakers to clean without encountering obstacles. She recommends:

“I think that’s a really important piece to think about when planning my space, how accessible is it for the caretaker? Because if they can’t clean the floor, if they can’t get their broom, around it. It won’t be clean. It’s the simple things, respect wise” (Interview, 2014).

Both Jamie and Andy, felt gratitude towards caretaking staff whom they feel performed high quality cleaning, easing their responsibilities of managing the classroom space.

Beyond the caretaking staff, one participant explained the importance of teaching respect and responsibility of materials and space, as well as, having the materials accessible for students to do this successfully. Mackenzie described a typical situation in her class:

“When you have taught them respect for materials, and if water were to spill we would never even know because three students would already have paper towel, cleaning it up off the floor… We also have glass containers, they could fall and break on the floor, but students always hold them with two hands. That’s what you tell them, you are carrying something that is fragile” (Interview, 2015).

With the space as a tool for learning, Mackenzie and Andy expressed using it as opportunities for their students to develop problem solving skills and autonomy. In addition to curriculum and school expectations, being responsible for a classroom space bears skills and habits for student’s to learn.

**Fire and Safety**

Along with a safe school environment, many school boards have fire prevention guidelines that teachers must abide by and caretakers must maintain and inspect. Although the school board’s protocol must be respected, Jamie felt limited by these
guidelines when designing her classroom space. She voiced concern by explaining, “they don’t let us hang anything from the ceiling and I feel like hanging stuff from the ceiling is one of the coolest ways to make a big impact for not a lot of money” (Interview, 2014). She mentioned that caretakers are expected to inspect, report and fix fire hazards like adorned ceilings to ensure fire prevention.

Fire and safety also influence a teacher’s classroom design in regards to the furniture and items within the space. The level of accessibility for literally moving furniture in the space often determines what can be brought into the space and the layout of other furniture. For example, Jamie and Andy shared the ways they had to problem solve and get help for carrying storage units and couches into their classroom spaces safely, without hurting themselves. Even decorating the walls sometimes posed as a challenge to do safely. Other features in the space, such as radiators or vents, also influenced where desks and shelves could go because they must not be covered up, again, for fire prevention.

With the goal of obtaining a classroom that is safe, clean and tidy, a teacher’s classroom design must also consider the people maintaining the space (e.g., caretakers, teachers and students) while attempting to minimize obstacles for achievement of this goal.

Size and Space for Flexibility

The size and shape of a classroom present teachers with a myriad of benefits and limitations for designing a space when adjusting to its users needs.
**Student Dynamics and Interactions**

To allow opportunities for students to work as a whole group, in small groups, and independently, the participating designers thoughtfully considered the size, shape and users of the space. Bailey declared that, “you have to be flexible with your space”, allowing space for people and things to move around (Interview, 2014). He depicted this explaining that in his class:

“We only meet as a whole group to do non-academic stuff… on the carpet that was big enough that twenty-two grade twos could sit on it, but no more than that. We do everything in small groups. So I’ve tried to set up the classroom with little areas where the small groups can work… I also removed a bunch of tables from this classroom… If every kid in my classroom is sitting at a desk, a table like desk, I don’t actually have enough room for all of them… I never want every kid to be sitting at a desk looking up at a board, because that’s not how I teach. So that’s why I felt comfortable pulling out those extra tables” (Interview, 2014).

If not sitting at a table, the students are sitting on the carpet, at a computer desk, in the hall, in child size Poang armchairs or a couch, with clipboards or whiteboards to write on. Bailey defended his choice articulating that

“… part of this whole classroom dynamic is the idea that if you frontload it by asking the students, ‘What are these chairs for? Why are we sitting in them? How do we behave in them?’ The students are able to self-regulate, and if they can’t, there’s someone who can’t focus in one of those chairs, they can’t sit in those chairs” (Interview, 2014).

To some degree, working independently, in small and whole groups requires choices from both the students and teacher. Jamie facilitated this choice having her students sit at independent desks and in small groups, being free to “swing their desks over if they are talking”, “although they aren’t directly in front of each other, they can still face each other easily and their group is defined” (Interview, 2014). At the time of the interviews, none of the participants designed spaces with student’s sitting independently, however, they did have independent workspaces students could use.
In order to best facilitate a variety of dynamics for collaboration and independent work, the classroom design should provide various, workspaces that are flexible for being changed.

**Storage and Organization**

When multiple people use one space there is an automatic need for storage to organize the users materials and resources. Like Mackenzie’s space, which allows students to access materials to maintain a clean space, Bailey mindfully designed his space with the desire for his students to function in the space with autonomy. Bailey reflected:

“I always said that I would want a kid who didn’t know my classroom, a new child, to come into the middle of the classroom, stand and do a 360 and then be able to know exactly where everything is... With the appropriate level of executive functioning, this class should be able to run without a teacher for an activity because everything is at the child’s level, everything is open, so I removed a ton of doors, there use to be doors on these cabinets, but if you want a child to get inspired by something you can’t have a door on it, because they are never going to look in there. I don’t feel as though a child that has to ask you for something, is a child who is autonomous and feels empowered and feels like the space is theirs” (Interview, 2014).

Providing student’s with access to materials helps them to be leaders in their learning.

There are however, resources students do not need access to and without storage for these educational aids, the tools would disrupt the organization and tidiness of the space. Andy agreed by saying, “all things that are exposed are things [students] need access to. So storage in terms of my resources and things are in cupboards,” she continued, “if I didn’t have all of these shelving things, not only would I not have the storage but I wouldn’t have…space for working” (Interview, 2014). As manipulatives, visual aids, writing utensils and books are incorporated into education, it is crucial to house these items in
storage when not in use, in order to attain a safe, clean and tidy space for students and teachers.

**Display Space**

Each participant used the walls to display visual aids for student’s learning. Jamie and Bailey both expressed a goal for wanting observers of the space to know what student’s are learning simply by looking at the interior walls. Jamie suggested a high level of necessity for

“Organiz[ing] wall space the way I want. To have, essentially, my learning goal posted. My application and my success criteria with anchor charts and student work to model beside. So it would be really frustrating for me to not have anywhere to put any of that because then there’s no frame of reference for the kids to go back to… I would have to hand them out something and then it’s in their binder, they’re not going to look at it again. That would be the biggest issues for me in terms of wall space” (Interview, 2014).

Like Jamie, each participant used the walls to provide visual clues for the purpose and use of the space. Jamie, Andy and Bailey each communicated a specific need for more display space. Andy often modified her preferences for storage “because we don’t have enough wall space to have them all up around the classroom” (Interview, 2014). Each participant explained that they often changed what went on the walls in relation to what they are learning in class. As statements of pride and expression for the students who occupy the space, observers would have also see photos of the users of the space. Furthermore, Andy planned for the accessible wall space to be used for these changing topics, while there are things on the walls, such as student’s self portraits, which are “permanent feature[s] because getting up there is a serious commitment of an hour. So once it’s up there, it stays for the year” (Interview, 2014). Supporting the need for a flexible spatial design, Andy claims, “how often you are going to be able to change it up depends on the
accessibility of the space” (Interview, 2014). Having wall space for teachers to control what is displayed is deemed important by all participants, whether it is magnetic, cork or something that glue, tape and sticky tack will adhere to.

The walls of the participant’s spaces are purposefully used as a gallery to display goals for learning, visual aids and photos of the students as a statement for recognizing who uses the space and what is being learned.

**Resourceful Spaces**

The school, the school board and the teacher’s personal finances provide many of the resources in a classroom. Beyond the resources administered by the teacher, the space itself can limit or offer opportunities for enriched educational experiences by allowing for technology and environmental accommodations.

**Financial Support**

Providing materials, and storage solutions most often costs money. Both Bailey and Mackenzie had classroom budgets that met their class’ needs. Jamie and Andy used their personal money and belongings for providing resources to meet their class’ needs in addition to the resources the school was able to provide. Of course, this raises the controversial involvement of teacher’s personal assets into the educational experience.

**Technology**

Inevitably, the pre-existing architecture, the shape and size of the space largely determines aspects of a teacher’s classroom design. At the time of the interviews, the technology used in classrooms needed to be plugged into electrical outlets temporarily to be charged, or permanently for power. Andy, Mackenzie and Bailey each had a
permanent interactive whiteboard next to a desktop computer workstation. Andy recalls a situation where her,

“SMARTboard was on the opposite wall from where the [electrical outlet] was, so [the] space that [she] was at when talking to [the students] was far away from them, which [she] hated. It wasn’t far away but it was behind them. So it gave different perspective, but [she’d] rather be beside them, with them” (Interview, 2014).

The location of the interactive whiteboard, often a gathering place for the whole group, must have access to electricity from an outlet or through an extension cord. Additionally, the computer attached to the interactive whiteboard also requires cable connections without compromising student and teacher safety, being a tripping hazard.

The areas offering electrical connection impacted Andy’s classroom design. She elaborated, “I have two power bars… you’ve got to work around the plug right? That’s something I’ve always said to student teachers, is that’s the first thing you have to think about when organizing the space, because you can’t move that, or move the sink, or the door” (Interview, 2014). Power-bars or extension cords help to increase flexibility of the space. Jamie agreed, “most of the time you need power-bars because where they want the computer to be set up is not practical for the way you’ve arranged the classrooms” (Interview, 2014). Apart from the design process of the school, a teacher needs to design their space within the given pre-existing construction, affecting the location of various resources including the integration of technology equipment.

**Individual Student Needs**

As explored in Chapter Two, technology evolves and continues to enhance the educational experience attempting to give all students a fair education. Again, noting that a “fair education” supports that all students have specific needs requiring specific
resources for learning successfully, as opposed to all student’s using the same resources despite their individual needs. Some of student’s needs are met with aids that require consideration from the teacher for the classroom’s design. All participants spoke to the importance of the space meeting the student’s needs. Jamie explained:

“…Sometimes I do feel like [space is] detrimental to their learning. Like for example, sometimes I have one student in my class who will ask to go to the SERT (Special Education Resource Teacher) room. She knows that she can’t be successful in the environment that she’s in, so she’ll leave and go there…why can’t my space be a space where she can get what she needs” (Interview, 2014).

Raising critical concerns, Jamie explored options for meeting this student’s needs such as headphones or a private room beside or even in the classroom. She then concluded “…if I could, in that hypothetical world and ideal scenario then yeah, every year my classroom would change to meet the needs in that room, but I don’t feel that we have the ability to do that for the most part in the public system” (Interview, 2014). Perhaps due to finances or systemic limitations, Jamie felt as though she did not meet each of her student’s environmental accommodations within her classroom space, but that the school did, by providing alternative working environments. Bailey mentioned being aware of and creating a certain flow within the classroom, making sure there is enough room to easily move between centres and work areas.

Jamie and Andy noted that chairs that were not tucked into the desks often interrupted the flow of their classrooms, especially if their students needed more room to move because of size, or assistive technologies such as wheelchairs. Andy altered her chairs by adding tennis balls to the legs. Although hesitant because she didn’t like the way they looked, after trying, she wouldn’t do without them because of the “big difference” it makes with minimizing disrupting sounds as someone moves their chair.
Definitely, specific needs require specific accommodations which teachers need to consider when designing classroom spaces in order to facilitate a fair environment that encourages all student’s success.

**Home**

All participants revealed that they always sought to make their classroom feel like home to some extent. The main way they attempted to do this was by having an established reading area or “cozy corner” with purposeful decorations and accessories.

**Reading Area**

Each participant created a reading corner, none of which was considered wasted or unused space. Jamie described it as “the coveted spot”, a reading area on the carpet with pillows, chairs, a coffee table, a blanket and books. Jamie thought “it [made] the classroom feel more like home to [the students]. Not such a sterile learning environment” (Interview, 2014). For Jamie’s class, student’s often asked to work there in small groups. At times they would be silly, but she calculated that the “value definitely outweigh[ed] the drawbacks” (Interview, 2014). Mackenzie’s reading centre was used as a place for “relaxation time”. Being a kindergarten class, Mackenzie believes “children know how they feel” and “you have to give the kids a place where they can self-regulate and be able to relax because they’re tired…” (Interview, 2015). You allow them to “just go and sit in the reading centre and they’ll get a book and they’ll spend ten minutes there and then they’ll go back to work” (Interview, 2015). Attempting to create a space where students want to be, read and learn, all participants had defined reading areas, noting it helps the classroom feel more like a home and less like an institution.
Decorations and Home

All participants used decorative elements as continuations of their purposeful design. Each participant manipulated the lighting in the space in efforts for creating a less sterile mood in the space. By turning off some or all of the fluorescent lights, Jamie and Andy admit that natural lighting or light from lamps is preferred. Every participant made efforts to bring nature into their classroom, through lighting and plants. In summary, Jamie, Andy, Mackenzie, and Bailey each had definite ways of decorating and accessorizing their spaces to reflect their individual philosophies.

In addition to designing an enticing reading area, Jamie endeavoured to design a classroom with a home “vibe”. Jamie had photo frames with quotes displayed artistically, which she used as prompts for character education and literacy topics. She considered her student’s desires, articulating “…I feel like kids, they don’t want to feel like they are walking into a sterile classroom all the time. They like to feel that they are coming into a warm, cozy, inviting space. So I try to do that as much as I can by making it feel like my house” (Interview, 2014). Proving that this she has been successful, Jamie remarked, “[the students] tell me how much they enjoy being in a space where they know where things are, where things are visually appealing… I find they respect the space and use it appropriately. And my teaching style is very similar to the way I keep my classroom too. It’s organized, it’s focused, it’s well laid out, the kids know what they’re learning, why they’re learning it. So I think they match, my teaching style and the space” (Interview, 2014).

Jamie tries to waive the sterile, institutionalized feeling of a classroom by representing herself, her decorating style into her classroom design.

Andy also reveals parts of her personality and philosophy in her design. In response to asking about the hanging baskets, tree, and potted plants on each of the small group desks, Andy replied,
“I want to promote that kind of ‘this is your space, this is our safe place together all day long’ and part of that to me is something warm, something that’s less sterile. You are talking to kids that are in grade one about what things are living and the materials they are made of… so just to try to make it a little more of a homey feel. This is a place where we take risks, we have a good time together, we trust each other. And to me, having something alive is part of that” (Interview, 2014).

Andy recognized that she feels good in that space and “like going to someone’s home, you go in and it speaks to a piece of them” (Interview, 2014). She confessed, “this is a piece of me” (Interview, 2014).

Mackenzie’s definition of home refers to a level of comfort with the space’s contents. In regards to the autonomy and responsibility she taught her students, she thought the student’s sensed

“That this is their space, that this is comfortable, that they have what they need. I think they feel very at home… that everything they need is here and if they can’t find it, they know that they can access it somehow and they also know that the teachers are there to help them make the decisions” (Interview, 2015).

She explained, just like being comfortable at home, “children are themselves and children don’t feel restrained” (Interview, 2015). She added that she wants a “seamless connection between school and home” (Interview, 2015). Through her classroom design, Mackenzie proposed that learning occurs both in and outside of the classroom.

Both Mackenzie and Bailey design spaces were in sync with the school’s Reggio Emilia philosophy. Bailey informed me that “Reggio believes in natural materials, dull colours so that the children’s work can really come to the forefront” (Interview, 2014).

He expressed the learning in his classroom in this way:

“We have three different types of pets and we have plants everywhere. Green is really important, I think there’s something about, something around my philosophy in terms of children being powerful and children being competent and children investing in things, you know. I want them to come to school to learn, but not to learn from me, to be engaged in the lesson and learn from each other,
and learn from the environment… there’s empathy there, these children don’t want to plants to die because they are empathetic to them as living beings. To someone who isn’t an elementary school teacher, it sounds ridiculous, but it goes a long way to them looking at viewing others and recognizing that when they are in a space, it’s not just them. Which I think is pretty important” (Interview, 2014).

Also bridging the gap between the classroom and the outside world, Bailey teaches empathy and presents provocations for further learning within his classroom design.

In conclusion, all participant’s feel as though their philosophies of education are represented in their classroom design by considering the safety and specific needs of their students, by proving resources and visual aids in a clean and organized arrangement with a level of comfort and home-like appeal, uses the space to promote learning beyond the classroom. There was considerable overlap in the research data, which leads me to believe there is purposeful design in teacher’s classrooms that is directly connected to philosophies of education.
Chapter Five: DISCUSSION

Discussion

Successfully, through both investigation of literature and conducting interviews, insight was gathered to further understand how this sample of elementary teachers’ philosophies of education influence their decision-making in their design and use of classroom space; as well as, the perceived impact these decisions have on student’s classroom learning experiences. All participants strive to create a home-like environment by cleaning, organizing, designing and catering to their students learning needs while generating a space to practice their pedagogical beliefs and philosophy of education. In this Chapter Five I draw connections between the literature and interview findings.

Health, Safety and Cleanliness

Like an ideal home, a clean and safe space free from the distraction of fearing harm, caretakers and teachers work towards maintaining a healthy and safe space with students. As the literature notes, maintaining a clean and safe environment is necessity for a student to feel comfortable (Dusenbury, 2012). This comfort and feeling of security allows student’s to develop towards higher learning and self-actualization (McLeod, 2014). In addition to valuing the caretaker’s roles, each participant took time to teach students, “respect for materials” (Interview, 2015), and allow time to “help them organize and clean” (Interview, 2014). Together, caretakers and teacher’s abide by their school’s Fire Prevention policies, ensuring materials are non-combustible and tending to all hazardous situations within the school (Toronto District School Board, 2013). Each participate took measures for obtaining a healthy, safe and clean classroom by creating a space which allowed caretakers and students to actively participate in these efforts.
Size and Space for Flexibility

Synonymous between the literature and interview findings, it is agreed that the classroom space must be flexible to accommodate the ever-developing learning and students and interactions that occur within the space. The various dynamics of interactions among students and teachers bring Patrick Bailey to recommend that both ‘student centred learning’ and ‘teacher centred teaching’ should occur (2008, p. 74). In order for these kinds of learning and teaching to occur, learning environments should be multi-functioning allowing for various activities (Jamieson, P., et al, 2000; Hassell, 2011). Participant Bailey agrees, commenting on designing a space that allows people and things to move around, “you have to be flexible with your space” (Interview, 2014). To encourage autonomy of their learning experience, all participants created spaces exposing resources, accessible for students. The organization of a classroom can be used to maximize children’s independence while also facilitating interactions among students (Horsch, P., et al, 1999). Jamie, Mackenzie and Andy arranged their spaces with defined centres for purposeful tasks and activities. Centres are recommended for primary education as they promote social skills, are hands-on and they provide opportunities for active engagement. They also invite exploration with visual displays (Grey, 2011).

The walls of a classroom can be used to display subject material, research, generate a sense of community, and provide students with work-space (Jamieson, P., et all, 2000). All participants used the walls to display student work and changed what was displayed in relation to what they are learning in alignment with the literature which reckons, “positing student work, both current and past, up on the walls tracks progress in a visible way (Cannon Design, et al, 2010, p. 65). Jamie and Andy also used the walls to
display anchor charts, learning goals and success criteria as visual aids for students and informative posters for passive observers of the space (Interview, 2014). While “extremely busy walls have proven to be distracting” (Bansal, 2015, para. 14), teachers should “step back and critically examine the quality and quantity of commercial materials on their walls” and how it contributes to student’s learning (Tarr, 2004, p. 92). With the quickly and continually emerging technological advancements, this examination should consider the implementation of multi-media presentation display (Cannon Design, et al, 2010).

**Resourceful Spaces**

The literature and participants recognize that there need to be flexibility with the use of space to accommodate or modify for technology and/or individual student needs. Andy and Jamie both use power-bars to organize their space because “where they, [the electricians] want the computer to be set up is not practical for the way you’ve arranged the classroom” (Interview, 2014). Andy notes that permanent fixtures including electrical connections are one of the first things she thinks about when designing her space because “you can’t move that, or move the sink, or the door” (Interview, 2014). These predetermined features force teacher’s to design their spaces in certain ways, sometimes, giving them limited choices. For example, if your interactive whiteboard is installed on a particular wall because it allows for power connection, that area becomes the class’ main meeting area. Universal Design strives for spaces that accommodate all accessibility needs but sometimes teachers cannot make these accommodations due to constraints (DO-IT, 2012). In addition to Universal Design, teachers make choices so that their student’s feel comfortable in their classroom helping to clear “the mind of the distractions
that impede the work for learning that needs to be done” (Herman Miller, 2007, p. 3). All participants desire to provide individual students with what they needed in order to succeed. Jamie asks “why can’t my space be a space where [my student] can get what she needs?” (Interview, 2014). Each student has specific needs for learning and the teacher’s spatial design can attribute to helping that student succeed.

**Home**

All four participants spoke of trying to make their classroom spaces feel somewhat like home. The main way each participant did this was by defining a reading centre with a couch to read at instead of desks and tables. Jamie explained that it minimized the feeling of a sterile learning environment (Interview, 2014). Like other centres, the reading centre “offers a variety of materials… through which students can work by themselves or with other students… to enhance the learning concepts, skills, themes or topics” of study through literature (Fredericks, 2005, p. 1). Like a home, the centres change with its users interests and skill development, perhaps adding another reason the teacher “[has] to be flexible with [their] space” (Interview, 2014). Another possible design consideration from the teacher questions whether the teacher will include living things into his/her space. The TDSB believes “living things make an important contribution to education of students” (Toronto District School Board, 2002, p. 1). All participants chose to include plants in their classroom designs. Although not part of the TDSB, but a College of Independent Schools following the Reggio Emilia approach, both Mackenzie and Bailey foster the care of at least one class pet in addition to plants. Bailey expressed wanting his students to learn to empathize with living beings (Interview, 2014). Ultimately, each participant had various ways of designing a space that reflected their
philosophies of education, all of which attempted to create a comfortable, home like environment for students to learn.

**Research Implications and Recommendations**

Being interested in both pedagogy and spatial design, this research allowed me to begin a journey for deeper inquiry regarding the ways in which teachers design their classroom spaces according to their philosophies of education, and the perceived impacts these choices have on their student’s learning experience. As a researcher I was able to investigate some of the countless theories, opinions and theories as to why some spaces are better for learning than others. I was also able to converse with people who had experience with creating classroom spaces that reflect their pedagogical beliefs and personalities. As a teacher I will critically think about the potential implications of my efforts to design classroom spaces that cater to providing individual students with what they need to learn best, while also creating a space that facilitates my philosophy of education.

I hope to be up to date with discoveries and findings for creating ideal work environments by reading research, attending workshops and discussing with experts and peers. For other teachers, I conclusively recommend they think critically about the spaces they have created to foster student’s education. My investigations imply that a clean, organized and safe space that suggests your expectations and values are crucial to providing a quality learning environment. As a preliminary checklist of considerations when designing a classroom space, it seems the following questions might be considered:

- How will my classroom design assist in the maintenance of a healthy and safe space?
o How will my space facilitate various types of classmate interactions?

o What types of interactions do I expect my students to have with one another?

o How can my space minimize any potential issues because of classmate interactions?

o What do I consider necessity for teaching and learning?

o How can these necessities be of easy access while also maintaining a healthy and safe (clean and tidy) environment?

o What do I consider beyond necessity, but still of purpose and value for teaching and learning?

o Where and how will these items be stored and organized?

o How will I access the resources, materials, tools, manipulatives, etc. to facilitate my pedagogical ways of teaching and learning?

o What is my criterion for purposeful wall display?

o How will my space encourage the use of technology for teaching and learning while maintaining a healthy and safe space?

o What technologies would I like to use purposefully in my classroom?

o What assistive technologies will be utilized in my space this year?

o How can my space accommodate for these assistive technologies?

o What are my student’s environmental accommodation needs?

o How will I, and my space, allow for these environmental accommodations to be fulfilled?

o What is my philosophy of education and how will my space reflect my beliefs for best practice?
**Further Study**

Although my qualitative research provided a thorough beginning to learning about how teachers’ philosophies of education impact their classroom design and how they perceive these decisions influence their students, it stimulated more questions for further inquiry. I question the history of why classroom spaces are the way they are and how they vary around the globe. I wonder about implications of classroom spaces with plentiful budget’s verses classroom spaces and learning environments in impoverished places. I am curious about the various details that manipulate and influence people’s performance in teaching, learning and workspaces. I would like to further investigate the elements of comfort and security and how that influences teaching, learning, behaviour and workplace performance. I would also like to explore the concept of teaching and learning in a place that feels like home to some extent, and how exactly that home like feeling is created and what it means for the future of educational spaces. Without a doubt I hope to continue to actively inquire and investigate the dependent marriage between philosophies of education and classroom design.
REFERENCES


APPENDICES

Appendix A: Letter of Consent for Interview

UNIVERSITY OF TORONTO
OISE | ONTARIO INSTITUTE
FOR STUDIES IN EDUCATION

Date:

Dear Participant,

I am a graduate student at OISE, University of Toronto, and am currently enrolled as a Master of Teaching student. For the purposes of my graduate research project, I am studying the relationship between teachers’ philosophies of education their design of classroom space. I think that your knowledge and experience, provide insights into this topic.

The purpose of this requirement is to allow us to become familiar with a variety of ways to do research. My data collection consists of a 45-minute interview that will be audio-recorded. I would be grateful if you would allow me to interview you at a place and time convenient to you, outside of school time.

The contents of this interview will be used for my research project, which will include a final paper, as well as informal presentations to my classmates and/or potentially at a research conference or publication. I will not use your name or anything else that might identify you in my written work, oral presentations, or publications. This information remains confidential. The only people who will have access to my assignment work will be my research supervisor and my course instructor. You are free to change your mind at any time, and to withdraw even after you have consented to participate. You may decline to answer any specific question. I will destroy the audio recording after the paper has been presented and/or published which may take up to five years after the data has been collected. There are no known risks or benefits to you for assisting in the project, and I will share with you a copy of my notes to ensure accuracy.

Please sign the attached form, if you agree to be interviewed. The second copy is for your records. Thank you very much for your help.

Yours sincerely,

Researcher Name: Julia Duiella
Phone Number, Email: (705) 795-2266, jduiella@mail.utoronto.ca

Instructor’s Name: Jackie Eldridge
Phone Number, Email: 416-978-0135, jackie.eldridge@utoronto.ca

Appendix B: Letter of Consent

Letter of Consent

I acknowledge that the topic of this interview has been explained to me and that any questions that I have asked have been answered to my satisfaction. I understand that I can withdraw at any time without penalty.

I have read the letter provided to me by Julia Duiella and agree to participate in an interview for the purposes described.

Signature:

Name: (printed) ________________________________

Date: ________________________________
Appendix C: Interview Questions

Master of Teaching Research Project: Interview Questions
Julia Duiella

Background Information:
1. What is your educational background? How did you come to be a teacher?
2. How many years have you been teaching? What grades have you taught?
3. What types of classroom spaces have you taught in? (Small, large, old, new, basic square, open concept?)
4. How many years have you taught at the school you are currently at?
5. What grade are you currently teaching and how many years of experience do you have teaching this specific grade?

Teaching Practices:
1. Can you please speak to the dynamics of classmate interaction and how or if you have arranged the space to facilitate this? For example, do your students mostly work independently or in small groups or whole group?
2. Have you encountered spaces that limit classmate interactions? How did this affect your teaching style?
3. What is your philosophy of education and how does it impact your teaching practice?
4. How else does your teaching practice influence your classroom design?

Space:
1. How many years have you been in the classroom space you are currently in?
2. What do you make sure to include in your classroom space?
   a. What do you consider necessity?
   b. What do you consider beyond necessity?
3. Where do you access materials for designing your space? Does administration support this? How?
4. Please describe the classroom space you currently work in.
   a. How do you believe the students benefit from this arrangement?
   b. How do you, as the teacher, benefit from this arrangement?
   c. How are you, the teacher, limited by this arrangement?
   d. How are the students limited by this arrangement?
5. Comparing the various spaces you have designed, what have you noticed about its effect on students?
6. What are some challenges you face when arranging a space to suit teaching and various learning needs?
Next Steps:
1. Describe your ideal classroom space?
2. What is limiting you from creating this described space?