Cursive or Right Click? A Critical Analysis of Lifelong Learning and Cursive Writing

András B. Kocsis

Mount Saint Vincent University

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Abstract

Cursive writing is a skill that contributes to learning, yet in an age of increasing technology it is no longer being considered as an integral aspect of the school curriculum. Cursive writing helps in terms of cognitive development, improves literacy skills and the aesthetics of handwriting and provides a foundation for lifelong learning. In this thesis I use Boyer`s (1990) integrative scholarship approach to draw upon different theoretical perspectives such as the pedagogy of multiliteracies, my experiences as a Waldorf educator, and various empirical research studies that follow the evolution of handwriting to current brain-based research on cursive writing. I argue that there are multiple benefits and reasons for retaining cursive writing as part of the curriculum in schooling. I further examine the ways in which neoliberalism shapes the decision-making process of educators, parents, and policy-makers, to weaken critical discourse that should inform important decisions in schooling, such as whether or not cursive writing is a valuable and important aspect of the curriculum. I assert that informed decision-making is key, and the main driving force behind it should provide very clear ideas of what people need to help them survive in the globalized educational context. I contend that the decision regarding dropping cursive from the curriculum was implemented without considering potential detrimental consequences. I also debate how this decision-making takes place.

In order to give the reader a better appreciation of cursive I provide a historical background of handwriting. Then I look at the literature on Waldorf schooling, to point out the connections between embodied and aesthetic learning and to explain why it is that cursive is so integral to the curriculum. The pedagogy of multiliteracies explains why we need more than one approach to literacy and that learning should be about inclusion not exclusion. Brain-based research describes what cognitive psychologists have to say about the importance of cursive

writing and intellectual development. In this thesis I scrutinize the notion of choice and express my concerns with regard to providing all children with equitable resources for growth and learning – we make these decisions as adults in our roles as parents, teachers and policy-makers so we have a responsibility to carefully assess options not just based on immediate job needs or economic expediency. I argue that our society is full of risks and what we need to do in such an environment is to realize that there are a number of variables that affect our learning trajectory; we must therefore learn to navigate based on the decisions we make and choices we elect. To find answers to my inquiries I considered it important to pull together the abovementioned aspects of research and theory to provide a cohesive argument for the importance of cursive writing, and to theorize from existing adult education literature.

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Chapter 1 – *Introduction*

Setting the Scene

Shakespeare`s metaphor in *The Tempest*, Act 5, Scene 1, "Oh, wonder! How many goodly creatures are there here! How beauteous mankind is! O brave new world…" (Jephson, 1864, p. 66) has an enigmatic hint for the 21st century human being. Great men and women before and after Shakespeare challenged the order of the world with their work and creations, and looked for the brave new world as an inspiration. When we read their handwritten work, letters or diaries, which were later printed, of course, we learn a great deal about their personalities and the cultures in which they lived from what was written. Great scientists such as Copernicus, Galileo, Einstein, Marie Curie and Roentgen, great writers such as Dante, Dickens, Goethe, Agatha Christie and Virginia Woolf, philosophers, artists and a great many explorers, politicians and musicians have enriched our humanity with the knowledge and experiences they have passed on to us through personally handwritten material. Even an embossed letter by Louis Braille that would become his famous tactile writing system had immeasurable consequences for blind or visually impaired people in terms of communication (Bullock & Galst, 2009).

Prior to the invention of mechanical devices such as the printing press, the typewriter, and finally the computer, virtually all information was recorded and transmitted as handwritten documents. Therefore, it was useful and especially important in business to standardize penmanship so that these documents could be easily read and understood by everyone. Benjamin Franklin was a proponent of proper handwriting; when he founded the Academy of Philadelphia (now University of Philadelphia) in 1749, applicants were required to master the art of good penmanship (Trubek, 2010). The Palmer (Hensher, 2012) and Zaner-Bloser (Carpenter, 2007) methods regulated the instruction of handwriting in schools for decades during the past century.

Penmanship was a separate subject and grade on report cards, and students typically spent 45 minutes every day on handwriting practice. In Canada today, such instruction and practice might receive 10 or 15 minutes of attention a few times a week in the classroom. Instead, children are now being taught keyboarding skills, and at younger ages.

Physically writing down words on paper and making meaningful sentences out of them is not a simple task for young students who learn to write in the early stages of their schooling. Creating a written composition that makes sense requires formulating an idea, retrieving words to match the idea, arranging the words in correct order, and then making the necessary editing so that the message is clear (Saddler, 2013). Before the development of computer technology, handwriting played a significant role in how people communicated; today, this is no longer the case. McHale & Cermak (1992) and Marr, Cermak, Cohn, & Henderson (2003) estimated that young children spend 31-60% of their time engaged in handwriting or other fine motor tasks. Based on my professional background as a Waldorf teacher, and on my experience as the father of two elementary-school-age children, I would argue that the abovementioned time is even less now, as computers continue to reduce actual handwriting time in schools. Consequently, cursive writing also suffers, or in cases in which educators consider it an outdated form of communication, it may not be practiced at all. Yet I believe, as Medwell & Wray (2008) point out, that handwriting instruction in schools is highly related to how well students later perform with written composition.

In my study, I am interested in exploring the contention that "we do not need cursive writing", an argument that is informing current policy and pedagogical decisions versus the arguments that can be put forward in favor of keeping the formal instruction of cursive writing in early childhood education. I am also interested in the process of decision-making with regards to

education. My concern centers on questions such as: How do people engage in decision-making processes? And how do we, as adult educators, parents, policy makers, and teachers, make decisions about which things are important for learning and which things are not? Decision-making is important because choices regarding what constitutes valuable learning are made based upon an understanding of social, cultural, political, and biological aspects. In this thesis I am interested in critically exploring the factors that should be considered regarding including or excluding cursive writing from the curriculum in schools. I believe that what may appear to be a simple educational decision is in fact extremely complicated issue, and the choices that are made by educators, policy makers and parents regarding teaching cursive writing may impact on people's lifelong learning opportunities.

My central argument is that cursive writing is an important part of literacies for human beings. I am interested in looking at how it is that we decided to dismiss that aspect of literacy by first isolating it, then not teaching it to our children, and now by (almost) deleting it from our lives. As educators we should address that. Boyer (1990) asserts that integrative research seeks to interpret, draw together, and bring new insight to bear on original issues (p.19). He observed that illuminating data in a revealing approach, making connections across the disciplines, and placing specialties into larger context is calling for the scholarship of integration. It also means interpretation, by fitting one`s research or the research of others into larger perspectives. I intend to investigate and define the meaning of my research questions and hopefully explain my meaning in such a way that it provides a more comprehensive understanding. Boyer also points out that inquiries such as these provide the power of critical analysis and interpretation.

To find answers to my inquiries I will theorize from the existing literature, and use critical theoretical perspectives in my analysis to inform my study. Integrative scholarship

alludes to the interdisciplinary nature of scholarship (Boyer, 1990). As Boyer points out, the advantage of doing integrative research is that it allows the researcher to draw upon scholarship that comes from different forms of disciplines and provides the opportunity for a richer analysis or discussion.

An integrative scholarship approach parallels the main argument Carpenter & Mojab (2013) provide: "The terrain of criticality in adult education must be many things at once" (p.167), suggesting that we must consider many approaches in order to provide a balanced, progressive analysis. In lifelong learning and adult education there should be a willingness for interdisciplinary analysis, and the many approaches in the field of criticality should be considered. By using integrative scholarship I will theorize from existing knowledge by reviewing the literature on Waldorf schooling, to point out the connections between embodied and aesthetic learning and to present important aspects of the curriculum that explain why Waldorf educators think cursive writing is so integral to learning. I investigate brain-based research to find out what cognitive psychologists have to say about the importance of cursive writing and intellectual development, and I examine the pedagogy of multiliteracies to explain how we need more than one approach to literacy. I consider how multiliteracy ideas resonate with ideals of social justice, similar to values that are frequently discussed in adult education and lifelong learning. Learning should be about inclusion and not exclusion – the value of technology should be appreciated and recognized hand-in-hand with many different aspects and approaches of literacy. I also draw upon neoliberalism and critical adult education theories to explain the process of decision-making and express my concerns regarding providing all children with equitable resources for growth and learning – we make these decisions as adults in our roles as parents, teachers and policy makers so we have a responsibility to carefully assess options and

alternatives that are not solely based on immediate job needs or economic expediency.

Through an integrative scholarship approach I am interested in exploring what our purpose should be as educators and where we should go in terms of confronting the social, economic and environmental challenges we face today. In proposing the scholarship of integration as a strategy of analysis, I would like to give meaning to isolated facts and put them in perspective. To better substantiate my argument I define the areas I talk about in my study and explain the various rationales behind these areas.

In *The Context of Cursive Writing* (Chapter 2) I go back in time and explain what constitutes "writing" and where it comes from. The historical roots of writing date back to at least 412,000 BC, to early Neolithic folk who were tying knots in string to remind them of things. Although this was not yet handwriting, it still depicts an elaborate action to record information before actual handwriting evolved. I argue that we can appreciate handwriting better if we have a good sense of its history and where it comes from. In this chapter I discuss early symbols, clay tablets, cuneiform writing, hieroglyphics, the Chinese influence and the invention of the paper. I contend that the evolution of handwriting is one of the most fundamental factors contributing to the shaping of thought in the history of humankind.

In *Waldorf Education and Cursive Writing* (Chapter 3) I argue for the importance of cursive writing by drawing upon the tenets of Waldorf education and on my experience as a Waldorf teacher. I further validate my argument through the consideration of the importance of aesthetics and by examining the curriculum and beliefs that inform a Waldorf education. I also illustrate the basic skills of teaching cursive writing from grades 1 to 3, and explain at length the importance of learning to write aesthetically while centering my analysis around a unique type of lesson mode called 'The main-lesson" and describing the characteristics of a Waldorf teacher.

The strength of Waldorf is that it takes an overall holistic perspective in terms of supporting the physical aspects of learning, incorporating both experiential learning such as tacit learning and the aesthetics of learning as an art-based curriculum. These aspects are extremely valuable qualities to develop amongst students when preparing them to engage in learning across their lifespan.

In *English Language and the Pedagogy of Multiliteracies* (Chapter 4) I explain that the pedagogy of multiliteracies is about acquiring and performing diversified skills and that this framework for learning literacies is situated within a commitment to education that has a social justice orientation. With a concern for language and education and in view of the dramatically changing social and technological contexts of communication and learning, I examine in this section the evolving landscape of literacy teaching and learning using the "pedagogy of multiliteracies", an expression first coined by Cope & Kalantzis (2009). The details of the analysis are in the questions of "why", "what" and "how" of literacy pedagogy. To the question of "why" I draw upon an interpretation of what was happening to meaning-making and representation in the worlds of work, citizenship and personal life that might prompt a reconsideration of the approaches to literacy teaching and learning. To the question of "what", I speak of the need to conceive meaning-making as a form of design or active and dynamic transformation of the social world, and the increasingly multimodal contemporary (linguistic, visual, audio, gestural and spatial) modes of meaning becoming increasingly integrated in everyday communication, media and cultural practices. In response to the question of "how", I analyze the limitations both of traditional literacy teaching, which set out to address language rules and establish good practice from literary models, and progressivisms that considered the natural learning models that worked for oral language learning to be an adequate and sufficient

model for literacy learning. In this vein I argue that the pedagogy of multiliteracies provides a lens for better understanding the diverse environment in which literacy learning is contextualized. The multiliteracies approach views learning as actively constructing knowledge, with the teacher providing scaffolding for the learners. Waldorf education regards learning in similar way. The concept of multiliteracies offers a framework that supports traditional ways of learning, such as cursive writing, and also integrates language strands involving reading, writing, speaking, listening and the use of technology through a broad range of genres such as aural, spatial, visual and multimodal. Literacies must be widened to embrace multimodal communication, including image, sound, gesture and space. Waldorf education also incorporates these ideas when teaching cursive (see Chapter 2 for more details). We need more than one approach to literacy, and both the pedagogy of multiliteracies and the Waldorf educational approach provide a rationale for retaining cursive writing.

In *Brain-based Research* (Chapter 5) I draw upon brain-based research to prove that the practice of cursive writing and handwriting generates substantial and significant activity in the brain. In short, I emphasize the fact that writing by hand is good for us in terms of our cognitive development. I describe some of the most significant studies done in this field carried out by Dr. Stanislas Dehaene, a psychologist at the College de France, Dr. Karin James, a psychologist at the University of Indiana, and Dr. Virginia Berninger, an educational psychologist at the University of Washington. I also specify the particular parts of the brain that are activated during handwriting. I explore whether are there certain parts of the brain that are engaged when one keyboards or texts but not engaged during handwriting. I conclude the section by revealing seven abilities and features directly connected with handwriting activity.

In *Neoliberalism* (Chapter 6) my analysis focuses on the process of how adults make

decisions that impact on our children's education in a neoliberal context. In this section I critique the idea that we are given unlimited choices, which we are not. I argue for an effort or for a "push" to be made to insist upon the actual opportunity to critique things, such as the underlying values that inform decisions regarding whether or not to retain cursive writing in the school curriculum. By examining the neoliberal environment one learns that we all live in a risk society, and even though things like choice, for instance, are presented to us as a multitude of possibilities, this is actually not the case. It is a chapter that examines from both a personal lens and also from a broader perspective the pathologies of the political and educational system afflicting our daily lives. I express my concern regarding a system that is at best an unnecessary complicating factor, and at worst a downright hindrance, to the managed pursuit of (un)predictable, measurable, and marketable outcomes in service to neoliberal imperatives, and has also entailed a steady stream of efforts to limit choice and decision-making among educators. To develop this discussion I draw upon theories from existing adult education literature and lifelong learning discourses.

While I have my fears about losing the focus on cursive writing, I – like everyone else – write a great deal on a computer; in fact, I wrote this thesis on my laptop. However, handwriting is important to me as being part of the process of meaning-making, and while for publication purposes my dissertation is typed I did make some notes in cursive. As well, in order to challenge people to think differently and to question the paradigm of what a thesis should look like in the academic world, my wife and I wrote some of the block quotations in cursive writing and I inserted these throughout this document. I have also included some visual diagrams and illustrations made by my children, who both attended Waldorf school, to show the reader some examples that illustrate the aesthetic focus of the curriculum in teaching cursive writing.

Chapter 2 – *The Context of Cursive Writing*

Background Information

Unfortunately there is little research that supports the unique importance of cursive writing; this is more often included within the broader context of handwriting (cursive and manuscript). Consequently, in this chapter I discuss how print writing and cursive writing gradually join forces and become handwriting, and examine the context in which learning to write takes place in the US, Canada and the UK at the present time. I argue that teaching both of these handwriting formats has advantages in the developing child and thus should remain part of our education system, and explore concerns that by losing cursive writing we also lose the culture that goes with it. I describe how the history of handwriting manifests itself from the early symbols made by the human race which includes clay tablets, cuneiform writing and hieroglyphics. I explain the Chinese influence and the invention of paper and I conclude with the argument that the evolution of handwriting is one of the most fundamental shapings of thought in the history of humankind.

Importance of Handwriting

Humans typically have a significant psychological/emotional response to the symbolism of handwriting. There are many examples in literature; in the Dickens' novels *Bleak House* (chapter 31), published in 1853, and *David Copperfield* (volume 3), published in 1863, the act of writing a letter is critical to each plot. In *David Copperfield*, chapter 7, poor handwriting leads to social isolation, while in *Bleak House* learning to write is a passionate aspiration for acquiring knowledge (chapter 31). Probably no one in the 19th century was a better witness of how the ability to write by hand might be an agent for social change than Dickens. Throughout American history, handwriting has reflected national aspirations; the Declaration of Independence, for

example, is handwritten in copperplate style. The belief that handwriting may reflect character is also widespread. Thornton (1996) points out that during the colonial period cursive writing was a form of self-presentation, not self-expression. She also reveals that male handwriting indicated a gentleman's integrity, while for women it was a form of artistry. Benjamin Franklin advocated handwriting, and according to him a "good hand" was a sign of class and intelligence as well as righteousness.

In 1904, according to Marge Rea, director of Pioneer Sholes School, St. Charles, Illinois, handwriting was regarded as the most important subject in the curriculum, and good handwriting was a sign of education, and very much a mark of status (as cited in Yackley, 2006). In my native Hungarian culture, neat, legible and consistent handwriting reflects clear thinking, intelligence and virtue. While these ideas have little empirical evidence to support them, nevertheless, as Isaacs (2013) points out in his editorial, a person's handwriting is unique, and as such it incorporates something of our personality and perhaps something of our humanity.

In the province in Canada where my family and I currently reside, the only English Language Arts curriculum document available to the public online is found on the Nova Scotia Department of Education and Early Childhood Development's website, and is called the Learning Outcome Framework (LOF). Most recently revised on October 1, 2015, the LOF presents the department's expectations to teachers in terms of content and methods, provides an overview of the learning outcomes framework organized by grade level and subject area, and is intended to serve as a survey of expected learning outcomes and as a tool for teachers. In the introduction of the LOF it is stated that the "curricula has been reconfigured to align across grades and disciplines in order to support an integrated approach to learning" (p.1). I therefore will hereafter refer to the LOF as curriculum. The curriculum has a number of general outcomes

for each grade and specific performance indicators that highlight key features and narrow the focus of teaching. Although the Language Arts curriculum focuses on reading, speaking, listening and viewing, there is no separate section for writing outcomes; rather, this is scattered among other Language Arts outcomes. According to the curriculum, students in grade 2 are expected to be able to identify and create written and media texts in different types of print (p. 59), and in grade 3 to experiment with technology in writing, e.g., computer software or the internet (p. 90). Nowhere in this document is the word 'cursive' mentioned at all (LOF, 2015). Elementary students are presumed to have learned to write in cursive by either the latter part of grade 2 or sometime during grade 3 (Supon, 2009), but by grade 4 there is usually no continuation of formal cursive instruction. In addition, because students' cursive writing abilities are not evaluated at any grade level, many teachers may feel that valuable instructional time is being wasted on acquiring a skill that is unnecessary in the 21st century. In order to appreciate what we might be "missing", perhaps it is necessary to take a look at what we are so rapidly doing away with.

History of Writing

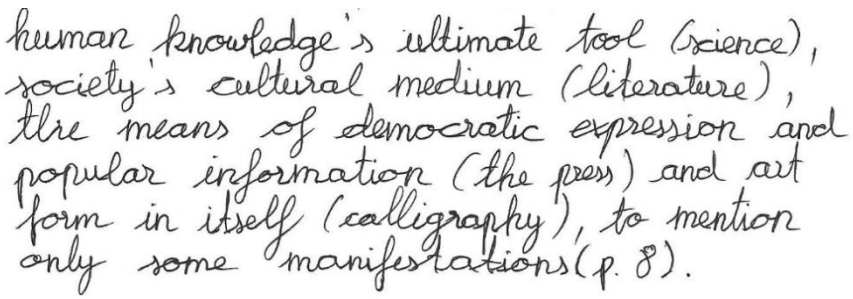
How people write today, and the importance of the skill for the emergent global society, can be more thoroughly appreciated by the virtue of understanding handwriting's origins. Fischer (2001) states that for nearly 6000 years handwriting has been embraced by humankind as a "tool of wonder", permitting the past to speak to the present. There seem to be endless ways to discover new needs and answers to our living, the latest being the issue around artificial intelligence or AI and smart cars (cars without drivers). Gelernter (2015) argues that huge strides are being made in expanding the spectrum of technology and computer science. He asserts that machines equipped for "deep learning" could eventually become adept at performing our daily

assignments and responsibilities. Drehle (2016) argues that if computers are going to grow much more powerful, scientists won`t stop in their pursuit of better programs on faster processors, a development that takes machines deeper into the spaces previously reserved for human intelligence. Gelernter (2015) predicts that computer science will have a far greater impact on our daily lives in the future than it has so far, however one can only hope that given the technology`s potential competing prominent scientists, inventors and entrepreneurs contribution to the world is going to be a benevolent development and not a catastrophic one. Gelernter`s prognostics have already affected many aspects of our lives presently, and it has changed the nature of learning, of work, of relationships, and influenced other human endeavors. Computers have affected our lives a great deal in that almost everything now is either run by or made by computers. For instance, cars are designed by the use of computers, in hospitals medical billings, patient admittance and other medical instruments are run and made by computers; traffic lights that control city traffic are run by computers. One of the major impacts of the computer is communication. Now one can be instantly connected with friends and family around the world, many business deals are made, and conferences are held through the help of computers. Movies such as *Harry Potter* or *The Lord of the Rings* require a lot of animations and use of graphics to create special effects. The field of education has also been impacted by computers; in universities computers help students with their assignments and presentations and keep track of grades. Teachers use computers to keep track of grades, and to prepare notes and presentations for their students. Through servers/networks, educational institutes can share resources by connecting computer devices together making research easier. E-learning, which means learning utilizing electronic technologies to access educational curriculum, is also a product of the computer`s development. Thus, some would argue that this device has a great deal of importance

in education.

This is precisely why we need to understand what computers are not, and can never be. This has led me into the field of lifelong learning and my investigative research into the subject of handwriting. As noted earlier, the modern world is rapidly changing and writing is not immune to this.

But writing is more than Voltaire`s (1824) “painting of the voice" as described in his work *A Philosophical Dictionary* (as cited in Fischer, 2001, p.8). Fischer explains that writing has become:



Today, electronic-based communication has rapidly intruded into and overwhelmed speech-based writing, and new forms of writing such as “tweets” and “blogs” have emerged and transcended everything we have understood to be described by the term “writing”. All forms of writing therefore appear to be descendants of the idea of graphically depicting human speech using signs and symbols that are able to convey people`s languages and social needs (Hensher, 2012).

Evolution of Writing Systems

Let us first clarify what ”writing” means, beyond the familiar English-language consonant-and-vowel based alphabetic writing system (Baron, 2005) with divided words progressing from left to right in descending horizontal lines (Fischer, 2001). Although writing is just one means of communicating human thought or speech, it has played a significant role in our

fundamental compulsion to store information for future generations, to provide "all thought" to forthcoming meanings (Ferrell, 1993).

Hensher (2012) rather cynically insists that writing was not invented by humans but by accountants in China at approximately 4000 BC, while divine provenance was cited as its origin by many cultures in Europe and the Middle East well into the 1800s (Fischer, 2001). Glassner, Bahrani, & Van de Mieroop (2003) maintain that until the Enlightenment (an 18th century movement that stressed the belief that science and logic give people more knowledge and understanding than tradition and religion) the origins of writing were mostly explained as an act of God, or – as some European scholars thought – the invention of the "first human" of various creation myths (e.g., Adam and Hebrew script). However, both Fischer and Hensher agree with Gaur`s (1992) assessment that writing was most probably invented near the middle of the fourth millennium BC by Sumerians in Uruk who were searching for a better method to record accounting information. They began to create one-syllable patterns by joining individual pictorial symbols together so that "man with a stick" meant "hunting.

The Dawn of Writing: Scribbles and Symbols

Before formal handwriting evolved, however, humankind made use of a wealth of symbols and memory tools, called mnemonics, of various kinds in order to record information. The most common themes of life, such as the Sun and stars, human-like figures, and geometric designs, were reproduced on rocks, pebbles, bones, sticks and slabs of wood. Fischer (2001) explains that the earliest mnemonics date back to at least the Early Neolithic (the last period of the Stone Age), approximately 10,200 – 8,800 BC. He points out that the Inca of ancient Peru also used mnemonics in order to record daily activity in their empire. A special class of public accountant called *quipucamayoq* ("keeper of the *quipu*", which was an accounting device based

on knotted cords) made sure that the system functioned efficiently, which meant that even after the Spanish conquest during the 1500s their services were retained. This is in fact an example of a civilization that never progressed beyond mnemonics to an alphabet-based written language. It can be asserted, therefore, that the use of *quipu* constituted a living and breathing communication system successfully applied by the Inca Empire to keep track of its financial, tributary, and commercial records. Much remains unknown, however, because it might be more than an accounting tool and may in fact be an authentic writing system. Historians continue to study *quipu* and hope that many discoveries are yet to be made, including perhaps a viable "Rosetta Stone". It is interesting to note that in addition, the modern Chinese, Japanese, and Korean written languages – while extremely sophisticated – remain pictorial in nature.

Steguweit & Mania (2000) describe several bone artifacts bearing regular cuts unearthed in Bilzingsleben, Germany, and dating to at least 412,000 years ago. The graphic symbols on the bones are thought to be intentional carvings, however their meaning (if any) has yet to be deciphered.

Bone Markings and Clay Tablets

Homo sapiens craftsmen began making more subtle stone and bone markings – purposeful carvings – around 100,000 years ago (Crow, 2002). Two engraved bones, decorated with abstract crosshatch designs, discovered in South Africa`s Blombos Cave are early evidence of symbolic thinking; other similar artifacts have also been found in Zaire (Fisher, 2001). Pictorial messages were already being conveyed tens of thousands of years ago, and in many ways cave art is also understood to be a pictorial form of communication, on a durable surface, related to articulate speech. Ucko & Rosenfeld (1967) explain that it is a communication that transmits limited graphic art within a limited domain, probably to those who were already

familiar with the aphorism; for instance, as a Native American narrative, the picture of a man crossing the lake to hunt a deer was an example of men doing a concrete action and was easily decoded by the “local community”.

Fischer (2001) and Hensher (2012) assert that only social necessity could produce such an eminent tool as writing. In the ancient Middle East, around 6000 years ago, the expanding Sumer society needed to somehow administer and record royal and temple inventories, manage revenues and expenditures, and regulate trade and workers' duties, so they developed something new and radical called bookkeeping. The Tartaria clay tablets (5300-4300 BC), discovered in 1961, 20 km east of Turda, Romania, are also early evidence of bookkeeping. They appear to represent a “graphic symbol inventory” of some sort, proving that the artisans of Central Europe at that time used symbols and signs to record informational details of their daily lives (Hood, 1968), and Fisher (2001) argues that writing was most probably born out of this very need. Ancient peoples used clay because it was abundant everywhere and easy to work with; one could easily erase mistakes, and if the material was simply sundried or baked, it could be preserved. Fisher explains further that similar clay tablet artifacts have been found in Turkey, Iran, and Israel, but most come from present-day Iraq, which was once Sumer. The emerging script from Sumer is called cuneiform writing, a form of writing that is distinguished by its wedge-shaped marks on clay tablets. The name cuneiform itself simply means "wedge shaped", from the Latin *cuneus* ("wedge") and *forma* ("shape”) (Glassner et al., 2003).

Cuneiform Writing

Cuneiform writing began as a system of pictograms. Significantly, clay tablets have not yet been found in Egypt. It is not known whether ancient Egyptians used clay tablets. It is a mystery how none of them have survived among all their other archeological treasures if they did

use them, but it may be that they for some reason preferred some kind of alternative. The clay tablets show different kinds of pictograms, where, for instance, the symbol for ʻfootʼ could mean either ʻfootʼ or ʻwalkingʼ and two pictograms such as ʻeyeʼ and ʻwaterʼ joined together meant ʻweepingʼ. The historian Fisher (2001) argues, however, that further modifications were needed if people wished to convey more complex meanings or reduce ambiguity. The answer was the creation of systemic phoneticism, which was the concept of "systematically coordinating sounds and symbols to create 'signs' of writing" (p. 30). He further asserts that "graphic symbols became signs of a writing system only when the phonetic value of a symbol began superseding its semantic value of limited, similar values" (p.30). Hence we have the nativity of writing, fulfilling three criteria:

- Communication
- Deliberately placing marks on a durable surface
- Using marks that relate to speech in such a way that communication is achieved

Most scholars argue that writing is an expression or result of an advanced level of civilization. However, writing is not an automatic consequence of social sophistication, it is an elaborate process determined by evolving social needs (Glassner et al., 2003).

The weight of evidence encourages us to conclude that the idea of (complete) writing emerged only once in human history. There may be other possible interpretations, but if we consider the vast collection of pictogram and symbol artifacts created by the Sumerians of Mesopotamia more than 5,700 years ago, it is clear when and how humankind`s most versatile tool was created. Fisher (2001) explains that cuneiform continues to enrich us even now:

> In 1975, over fifteen thousand cuneiform tablets were discovered at Elba (Syria) which once comprised the official library that had burnt around the year 2300

> BC... In use for about three thousand years – the same length of time that our complete alphabet has been known – cuneiform is today appreciated as one of humankind`s premier scripts (p.57).

Coulmas (1989) points out that more than 150,000 cuneiform inscriptions have been excavated so far in Mesopotamia; 75% of them are bookkeeping and administrative records, the earliest of these being predominantly lists of goods, people, payments and such. It will take scholars at least a century to read and assess this enormous wealth of information.

Hieroglyphics

Also crucial to the history of handwriting was the Egyptian innovation of having pictures stand only for the sound of their beginning consonant, the so-called logo-consonantal signs (Trigger, 1998). Fisher (2001) explains that Egypt had borrowed from the Sumerian "idea of writing", but the former civilization also created the 26 uni-consonant signs, which was the world's first functional alphabet. This remarkable system of hieroglyphics included 26 consonant signs, or hieroglyphs, and as the principle of a writing has become widely accepted as the first true writing. Thus the world owes a great debt to the Egyptians scribes, because even though the idea of writing came from Sumer, some of the letters still in use in western languages are clearly descended from symbols created by ancient Egyptian founders. Over the next 4000 years, the Egyptians developed four interrelated scripts: hieroglyphic, hieratic, demotic and Coptic. Hieratic script, written mainly on papyrus but also on other surfaces, was developed by accountants, and with its links between letters and other simplifications, it – unexpectedly – looks like handwriting (Hensher, 2012). Fisher (2001) explains that hieroglyphics were mainly used for ceremonial purposes, and the two cursive scripts-- the hieratic and much later the demotic – were almost always written in a type of ink on a material called papyrus, which was a

kind of paper fashioned by pounding strips of the plant *Cyperus papyrus* into sheets. We learn from Ryan (1988) that the oldest surviving sample of papyrus comes from a First Dynasty tomb at Saqqara from c. 3000 BC, and its use continued in Egypt until the first few centuries AD when the Greeks invaded. Papyrus had great material advantages over Mesopotamian's clay tablets; it was thin, light, flexible, compactly stored, and easy to write upon, and the ink dried quickly on it. Because engraving and drawing hieroglyphics was so time-consuming, hieratic script on papyrus as a practical tool was almost instantly embraced, and became ancient Egypt`s cursive writing of choice for everyday script, personal, business and administrative correspondence, and written literature. By approximately 2500 BC, nearly all the graphic elements of the Sumerian writing system had also become sound units, and by 2000 BC only about 570 symbols that represented parts of words or whole words, the so-called logograms, were in everyday use. Fischer`s (2001) research shows that the Phoenician alphabet with 20 consonants was developed at approximately1000 BC, and was followed by other writing systems such as Greek, Hebrew, Arabic, and others that have not survived. From then on, all handwriting in the western world was alphabet-based.

The Chinese Influence

Hunter (1978) observed that human being`s intellectual power rose as methods of communication evolved throughout the world from the Middle East to the Orient. The long progression from drawing in the sand and on the walls of caves, to incising symbols, pictograms, and hieroglyphics on more workable materials such as bone, wood, stone, metal, ceramics, and bark, and finally to the use of ink on papyrus runs parallel to the rise of some of our most significant ancient civilizations. Then in 250 BC, a Chinese philosopher created the camel`s-hair brush, an innovation that revolutionized the writing of Chinese characters and played an

instrumental role in the further development of woven cloth as a writing surface. This material along with papyrus in Egypt and parchment (animal skin scraped very thin) developed in Asia Minor made possible the manuscript scroll, which possibly constituted the first form of books. Hunter reveals that the rapid development of calligraphy by Chinese scholars, their adoption of the new writing bolstered by the camel`s-hair brush and the need for a different, cheaper writing surface than woven cloth inspired CaiLun, from the Eastern Han Dynasty, to invent paper from worn fishnet, bark and cloth in 105 A.D. These raw materials could be easily obtained at a much lower cost so large quantities of paper could be produced. Paper making was introduced to Korea in 384 A.D., and a Korean monk then took this skill with him to Japan in 610 A.D. During a war between the Chinese Tang Dynasty and the Arab Empire in 751 AD, the Arabs captured some Tang soldiers and paper-making workers. As a result, a paper factory was set up by the Arabs and the act of putting marks on paper with ink was well and truly on its way! In the 11th century the process was carried to India when Chinese monks journeyed there in search of Buddhist texts. Through the Arabs, African and European cultures then mastered paper making. The first paper factory in Europe was constructed in Spain, and in the latter half of the 16th century the technology was brought to America. By the 19th century, when paper factories were set up in Australia, paper making had spread throughout the civilized world. So, the evolution of paper has greatly facilitated the development of writing.

Learning and Handwriting

The discourse that writing is a tool for learning and understanding meaning is supported by history. Postgate (2005) reminds us that a clear progression is evident with cuneiform writing, which underwent various refinements in technique and materials. Glassner et al. (2003) have gone further with this argument, stating that writing should be seen within the context of

evolutionary theory. Their idea relies on the perception that human knowledge develops gradually at a steady pace, but that the pace was much slower in the past than it is today. This argument can be disputed because human knowledge has historically progressed by sudden and drastic leaps, interspersed with stretches where we were content with things the way they were. In the past, the time period between significant related innovations might be centuries long (see the examples of papyrus from at least 3000 BC vs. paper three millennia later). In the modern era, the length of time between innovations has been shortened – not necessarily because humans are "getting smarter", but because collaboration on a global scale is now possible. Glassner et al. (2003) also reiterate the notion that archaeologist V. Gordon Childe put forward – that the inventors of writing were agreeing upon a conventional method of recording receipts and expenditures in written signs that would be intelligible to all their colleagues and successors (Dever,1996). This in my view is (shared) learning at its best, and one can argue that writing has become a tool of learning. Of course one can offer a Marxist analysis to my view as well, i.e., that the invention of writing is explained materialistically; an extremely complex economy required an advanced system of notation and recording, and writing provided that. For example, of the surviving Uruk clay tablets, 90% (as noted by Glassner et al., 2003) are comprised of administrative subject matter, reflecting the bureaucratic role of writing in the economy. Glassner et al. describe a list of words compiled on these tablets that seems to be grouped into categories, such as "vessels", "textiles", "animals", "fish", and so on, thereby creating order. We can only speculate as to the logic behind the sequence, but most scholars accept that the list shows a certain level of intellectual activity, hence learning took place. A good bureaucrat would have to learn the forms and the meaning of signs, and these lists helped him. The remaining non-administrative records, however, are important indicators that the Mesopotamians saw writing as

a tool to organize their private lives, their personal universe, which should also be considered of great significance.

Glassner et al. (2003) and Foucault (1982) are interested in the history of ideas that are focused not on (pre)determined patterns but on discontinuities. Foucault (1973) contends that the invention of writing can be regarded as equivalent to one of the most fundamental reshapings of thought and our perception of the world in modern European intellectual history.

Chapter 3 – *Waldorf Education and Cursive Writing*

In this chapter I draw upon the tenets of Waldorf education and on my experience as a Waldorf teacher to emphasize the importance of cursive writing, where learning to write joined-up letters is still regarded as necessary. First I define Waldorf education and the importance of aesthetics in learning. Then I present essential aspects of the curriculum and I also explain basic skills and the concept of form drawing. Finally, my focus turns to the main-lesson and the class teacher, which provide insight into one of the most important features of Waldorf education.

Waldorf Education and Aesthetics

In Waldorf education, the self-activating quality of the power of human thinking and understanding constitutes the fundamental inner dynamic around which both teaching methods and content turn (Clouder & Rawson, 2000). Waldorf educators believe that handwriting and cursive writing in particular is needed, as it is a basic skill without which access to the adult world would be severely restricted. Basic skills are the instruments through which a relationship with the world is formed and expressed (Avison, 2004). Avison also points out that it is with the teaching of basic skills in primary schools that educators should make their entrance into the world of (creative) teaching and learning. Teaching is, after all, an "awesome" profession (if we reinstate the description to its pre-decadent meaning), and the curriculum exists for the children, not the children for the curriculum.

Important Aspects of the Curriculum

The vital concept for the curriculum in a Waldorf School is: from the whole to the parts. Learning begins with the whole world, and then the analysis begins.

The first three grades (ideally ages 7 to 9) can be characterized as working with enduring imitation while preparing for more individualized character of the years beyond the ninth or so-

called Rubicon year. Grades 4 through 6 might be characterized as the years of "self-possession"; the individual gradually absorbs the impulses of his/her class community built up by the teacher in the first three years. Then in grades 6, 7 and 8, the "community circle" is gradually broken and a differentiation is accomplished.

The curriculum`s indications are not definitive in scope and content; the Waldorf teacher is free to find his or her way to articulate what they plan to do with their own classes, according to their own vision and insight. This is a rather significant difference from the Canadian public school system with a very structured curriculum.

Basic Skills

We have to appreciate basic fundamentals, such as cursive writing, and by recognizing them as important skills for a child`s development we may contribute to making our pupils active, in every sense of the word, in a modern world that encourages passivity. The teaching of cursive writing in Waldorf schools involves various physical activities as well, enabling the young novice learner to actively engage with the world. As Avison (2004) explains, a conscious cultivation of movement throughout the learning of fundamental skills is a remedy to the "body becoming too heavy for the soul to carry [in puberty]" or to "adolescent lethargy" (p.11).

Children should have access to rich learning experiences every day, so that when they reach certain stages in their development in every year of their life they are able to face challenges with confidence and "proper skepticism". If, as educators, we persist in making learning in schools one-dimensional, boring and uninspiring, we cannot hope for much lifelong learning in adult life.

So how does the fundamental Waldorf dynamic of "self-activating quality of the power of human thinking and understanding" translate into actual classroom practice? The following analysis of teaching cursive writing is a prime example of that.

In Waldorf schools, cursive writing is preceded by drawing lessons, called form drawing. Children first learn to draw straight and curved lines, and practice them in repeated rotation in different sizes and in a variety of forms. Exercises with vertical, horizontal and diagonal lines, with shapes and angles, triangles, squares and other regular-sided shapes are designed for students to practice (Rawson & Richter, 2000). Convex and concave curves, waves and circles, ellipses and spirals help children to experience the quality of the movement, sometimes by walking these forms, other times by drawing them on a sand plate or on a huge piece of paper laid out in the classroom. These continuous patterns and sequences serve as a preparation for cursive writing. The drawing examples below (Figure 1) provide an idea of what forms a teacher may choose to practice with children:

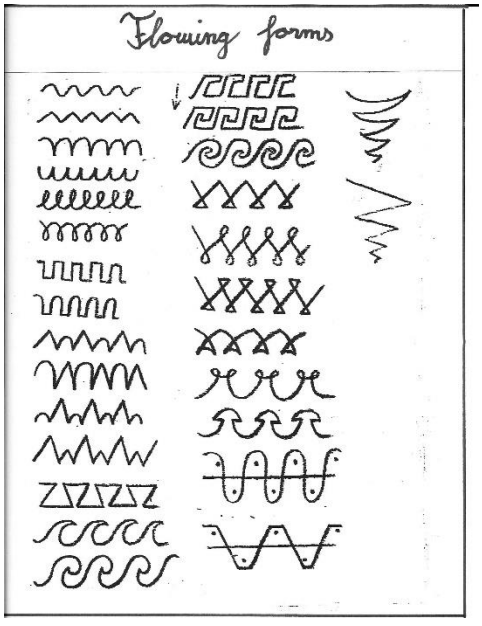


Figure 1: Flowing forms

Form Drawing and Movement (Grades 1-3)

The first three school grades provide the foundation for sound and proper writing skills in the Waldorf education. The purpose of form drawing is to awaken the children`s sense of form. This is needed and used when they learn to read and write, therefore one can argue that form drawing is a preparation for techniques that belong to our civilization. Form drawing is also called dynamic drawing, which entails that when children draw the straight and curved lines they are also making shapes with their whole body, often as the first step in the process. They walk, run or make sweeping movements with their hands and arms. Only later are crayons and pencils used as a "resting" activity in order to draw the shapes on paper. The aim of these exercises is to make children carry out purposeful, concentrated efforts in movement, a process ideally suited for them. The shapes they practice have no outer meaning as such, neither do they depict anything in particular; rather, they make the dynamic of movement and shape visible in space. Experiencing the inner nature of things through movement is a daily feature in Waldorf schools; in grade 1 this is an excellent preparatory activity for writing, while in grades 2 and 3 these activities stimulate the forming of mental pictures, which both engages the will and stimulates feelings. Rawson & Richter (2000) view this as a process by which the child feels the balance, symmetry, proportion, integration and character of the forms and the dynamic movements they embody; in a sense, *feeling* is animated and used as an organ of perception. Movement mobilizes the child and places him/her into a meaningful relationship with the physical world, and the rhythm helps the movement education. Rhythm has many dimensions in the classroom context, when students encounter holistic learning experiences. Skipping and clapping games are especially important. Bean-bag exercises involving passing, throwing and catching help hand coordination, and repetitive songs and chants accompany these exercises (Brooking-Payne,

1997). In grades 1 to 3, music also provides a group experience in which the song carries the activity and is less focused on the individual. Through this specific kind of exercise, students gain confidence as they improve their co-ordination, dexterity, sense of spatial orientation, and rhythm, and learn to follow instructions. In essence, within Waldorf schools**,** students experience the quality of movement, and the form shapes them and connects with their feelings. The movement is not primarily concerned with the result but with the process.

In adult education contexts this attention to embodied learning fits with discussions regarding experiential learning and tacit learning (Fenwick, 2000). Writing about experience is sometimes linked with having physiological experience. In the adult education literature may be referred to as embodied learning. Tobin & Tisdell (2015) explain that fiction writers in their study developed a broad sense of body awareness, a "felt sense" that encouraged the flow of writing. Tobin & Tisdell assert that creative writers learn in a holistic sense through studying their writing processes with attention to the body. Creative writing therefore can be facilitated through the engagement of body in the writing processes. As adult educators we should understand that writing is a way to learn and as the Tobin & Tisdell (2015) study shows it is also "a way to reflect, even heal" (p. 229). A clear example of the way writing helps the process of healing was the unfortunate terror attack in Brussels, in March 2016, where it was interesting to see people gathering in the plaza outside the Bourse – the Belgian stock exchange – to pay tribute to those who had been killed and injured. Messages of hope, peace, defiance, comfort and unity were chalked on the plaza's asphalt as an act of solidarity and mourning (for more details go to www.ctvnews.ca, abcnews.go.com, theguardian.com and nytimes.com and search: Brussels attacks). As Tobin & Tisdell (2015) point out, by engaging the body we enable a holistic learning approach to occur, which could not only affect writing but perhaps offer other ways of creative

engagement as well.

Learning to Write Aesthetically

Rawson & Richter (2000) contend that form drawing in grades 1 and 2 is a "pictorial learning" that aims to cultivate inner perception that enables thinking to develop "without slipping into an intellectual mode" (p.83). In order to practice pictorial learning, children ought to be mentally active. For instance, one way of practicing this inner perception is to give children one half of a symmetrical form and let them find and complete the other corresponding half. In the drawings scanned from my son`s grade 2 exercise book we can follow from left to right three examples that show the progress of learning during this particular exercise (Figure 2):

Figure 2: Symmetrical forms

The students feel that what has been given to them is unfinished, incomplete and imperfect, so the aim is to complete the form, and thus make perfect both their imagination and the image on the paper. Learning to write is a process inquiry, a truly dedicated time of learning during which such exercises are suitable in enhancing the capacity to imagine, the ability to develop a sense of form and style. Children develop a sense of form through meticulous practice during which more complex symmetries and cross-over patterns are drawn. The patterns learned

then are used in the teaching of geometry in later stages.

The newly awakened sense of form is then used when students learn to write and read. Children learn to write cursive throughout their first school year, with the process proceeding from pictorial representations of the letters to formal writing. The shapes of capital letters are presented to the children embedded in an artistic drawing made by the teacher with an accompanying story that emphasizes the character of the letter. The letter T, for instance, may be based upon a drawing of a tower, while W perhaps evolves from the shape of waves of water. Next the letter is separated from the pictogram and practiced alone, first in uppercase; its lowercase form is introduced later in the school year. The "act of separation" of the letters is vividly explained by the renowned Russian painter Wassily Kandinsky, who said that if a line drawn in a picture is freed from having to denote something specific and can therefore function as something specific itself, then its inner sound is not weakened by any subsidiary role, so it can exercise its full strength (Kandinsky & Sadleir, 2008). In the example above, the point at which the letters in the story become the letters in the alphabet used in writing is a true moment of transformative learning. In my daughter`s drawing we can see how the mountain symbolizes the letter M (Figure 3):

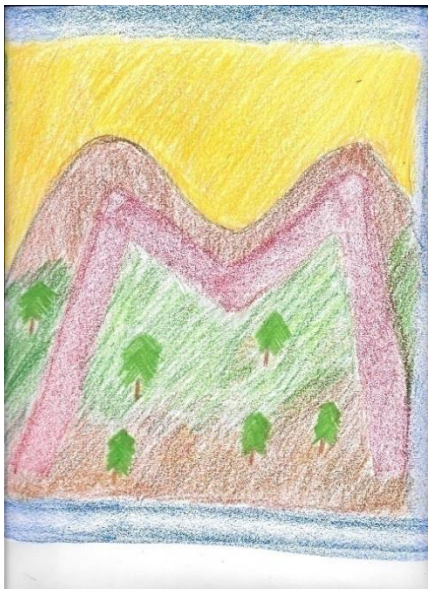


Figure 3: M for mountain

Rawson & Richter (2000) explain that the children learn gradually to write throughout the first school year. The content of the written work is related to the main-lesson block themes and the children`s experiences. The main-lesson block is one of the most successful and distinguishing features of Waldorf education. It is the period of time during which a subject is taught for two hours every day for three to four weeks. This allows teachers to cover the curriculum intensively and economically, and provides the students with the fullest possible immersion in a subject. The main-lesson block ensures that students have sufficient time to experience a living process of learning. As a general guideline, about one-third of the writing is composed by the children, and the other two-thirds the teacher prepares and either places on the blackboard to be copied or dictates to the students.

As mentioned earlier, out of form drawing follows the introduction of capital letters through movement, gesture, speech, and pictures. Consonants evolve from pictograms, vowels emanate from interjections and expressions of feeling. Psychologist Kainz (1967) explains the process of handwriting as follows:

> Learning to write during childhood is an intensive process lasting several years that has the effect of retraining the effectiveness of specific neural systems. Writing is difficult because it is served by a number of complicated movements. But complicated movements can only be carried out successfully if they have been thoroughly practiced. This practice is an optical-motor achievement of procedural memory based on a physical substrate. We may imagine that the functional fine tuning brought about by practice leads to most delicate changes in the movement centers of the central nervous system (p.52).

Perhaps it is worth re-emphasizing that the emergence of formal writing is preceded by the pictorial representation of letters, which includes exploration of the relationship of sound, symbol and movement. The shapes of the consonants as capital letters are presented to the children embedded in an artistic drawing made by the teacher, then the letter is separated from the pictogram and it is drawn and practiced in its own right. The capital letters are followed by the lowercase letters, which require more attention because some can only be distinguished by their orientation, e.g., d/b, m/w, u/n. It is very important that the letters are written accurately, anticlockwise and top downwards. In practicing such mirror images (left/right, above/below), children learn orientation in the dimensions of space.

The common mistake novice teachers make is to teach the whole alphabet with a story and picture. In this case, learning the alphabet will take a whole year, and in today`s world we can ill afford such a lengthy process. Instead, once the students have understood the concept – first experience (story), then picture, then letter – the teacher can teach the rest of the letters more efficiently and economically. This approach is used for consonants. With regards to the teaching of the vowels, Rawson & Richter (2000) provide the argument that the Waldorf curriculum in

general supplies a rich experience in teaching and learning – the vowels are presented as interjections expressing emotions. For instance, wonderment can sound like “ah”, surprise like “oh”. Experiences such as these embedded in a short description and expressed in a picture pave the way “for the discovery of the letters for the vowels” (p.108). In English, however, we do not call the letter “A” *ah*, because it rarely makes that sound unless it is accompanied by an “r”, as in *cart*. Although it is important to express the many qualities of the vowel it is also helpful to concentrate on the short vowels to begin with, such as *a* as pronounced in *a*pple, *I* as in *I*ndian, *e* as in *e*lephant, *o* as in *o*range, *u* as in *u*mbrella. This process allows the children to almost immediately read and write simple words. Also there is a clear distinction between the *name*s of the vowels and sounds of their long forms, for example “*A*” for *Angel,* “*E*” for *Eagle,* “*I*” for *Icicle,* “*O*” for *Opal,* and “*U*” for *Unicorn*. In this way, teachers can lead the process to different letters while enriching the learning in a variety of ways. If the systematic method has been applied properly and practiced for a while, analytical processes can be called upon from the children to perform new tasks. Alternating between synthesis and analysis amounts to more than merely a helpful way of teaching; it is a process that has an enlivening effect on children, as they learn through analytic, phonetic and spelling methods (Piening, Lyons & Rudolf Steiner School, New York, 1979).

Then children learn to read what they have already written or what the teacher has written on the board. Rudolf Steiner, the founder of the Waldorf approach, told teachers that the first words children read and write should be of great significance in content and already familiar to them, such as “The Sun gives light to the world” (Richards, 1980). This argument is similar to the strategy used by Freire in teaching adult literacy – where he suggested that literacy should become a meaningful construct, and generative words should have meaning to the learners

(Freire & Macedo, 1987).

I assume many contemporary educationalists would argue that the age of seven (when Waldorf children start grade 1) or eight (or even nine in some individual cases) is too late for a child to be just learning to read and write. They might have a point; however, if one regards the years between age seven and nine as an extension to the children`s orality where considerable learning in a variety of topics and areas occurs, one does not need to worry. Here, literacy is not leading the processes of reading and writing; rather it complements and supports them. Rawson & Richter (2000) echo this when they assert that the moment children learn to read is very individual regardless of the method used to teach them; children will read when they are ready. The systematic and careful introduction of literacy skills benefits all children, but these competencies are not used, as Ullrich (2008) asserts, as a means of accessing information or as learning tools, rather they are abilities that receive their context from the overall framework of the lessons. It is a distinctively Waldorf approach that humans learn to read and write *in order* to learn.

While I am not arguing in this thesis that all schooling should use a Waldorf approach, I do believe that teachers should think critically about the underlying learning when they are designing and carrying out curriculum, and they should pay more attention to writing skills since these are integrally associated with learning**.** So what this discussion of the Waldorf curriculum brings to this thesis is an explanation of how educators might critically think through the potential benefits and learning challenges that people encounter when attaining literacy skills such as handwriting. In addition, the Waldorf curriculum shows that learning is considered to be a holistic process, connected to physical and aesthetic development in skills that lays a foundation for later learning throughout the lifespan.

Rawson & Richter (2000) explain that beginning in grade 2 and by grade 3 children "pay close attention to their writing" and "develop an aesthetic relationship with it" (p. 112). According to the Waldorf curriculum, children in the normal ability range can read, write and spell with "developing enthusiasm" by the time they finish grade 3. In grades 2 and 3 the emphasis is on developing good, beautiful, flowing cursive script, and students are constantly helped and regularly corrected as necessary with regard to their pencil hold and posture. Neat, legible handwriting is encouraged.

In the lowest grade, very little free writing is done in Waldorf schools compared to public schools; instead, children write about the stories they have been told by their teachers. By grade 2, however, they will be getting keen on writing their own material. In order to support this need, they are encouraged to write letters to the teacher or to each other, and this way the educator can address spelling mistakes and use them as part of the literacy program. The letters also provide valuable reading practice. This exercise can be made even more interesting for the children by installing a "mailbox" in the classroom and having them post all the letters in it. Students can then take turns assuming the responsibility of sorting and delivering the letters to their respective "destinations". This activity can continue well into grade 3.

When children begin to write cursive, their writing becomes more individual or personalized. Paying close attention to the parts of letters that sit on or extend above or below the line in specially-designed exercise books encourages the writers to develop an aesthetic relationship with their unique handwriting and strive to make sure that their written work is accurate, beautiful and tidy. Writing beautifully and aesthetically is to express respect for the person who will read the words, therefore it is the responsibility of the writer to present the reader with clear, well-formed letters and word shapes. When the children have had sufficient

practice, they are taught how to use a fountain pen, which provides a further opportunity for the teacher to have a good look at the children`s work. It is also important at this stage that the teacher help students with their hand position and the activity of their fingers, and monitor and correct the students` posture. From the cursive writing examples produced in the class the teacher introduces grammar and correct word usage, sentence structure, punctuation, and spelling, and provides other instruction and guidance as the opportunities present themselves (Rawson & Richter, 2000).

In the further stages of Waldorf education, cursive writing is practiced through essays, accounts of scientific experiments, adventure stories, short poems, short summaries of spoken presentations, personal diaries, and other exercises. Learning to write cursive in a Waldorf school permits the student to experience, feel and understand the inherent quality and nature of different shapes and movements. Experiencing the inner nature of something, gaining access to things, is one of the basic themes in the Waldorf curriculum.

In my opinion, these notions of experiential learning and integrating mind and body in analysis (Tobin & Tisdell, 2015) align well with the lifelong learning discourse, whereby having access to knowledge through education has the potential to develop a well-balanced human being with sound social and moral attributes (Dahlin, 2010). Society needs individuals who are somewhat inclined to be guided by moral qualities like love, fellow feeling, solidarity, and courage to stand up for what they think is right. Dahlin stresses individual responsibility; he asserts that people who have "greater confidence in inherent human goodness [are more likely to] solve moral problems at a social level" (p. 175). In order to have a complete understanding of the Waldorf perspective two main educational aspects ought to be defined: the notion of the main-lesson and the teacher.

The Main-Lesson and the Waldorf Class Teacher

The Main-Lesson

The main-lesson is a central feature of the Waldorf approach; it is here that handwriting is diligently practiced. The lesson begins each school day and is normally about two hours long. Subjects are taught in blocks of several weeks (three to four) at every level of grades from 1 to 12. The main-lesson addresses and encompasses a varied and progressive set of skills, competencies and faculties in English, mathematics, the arts, sciences and humanities. Each day`s main-lesson is regarded as an integrated aspect of learning. Meaningful connections are made across subject areas and between main-lesson themes. The class teacher has the freedom to choose material and activities that best suit the requirements of the curriculum and the specific needs of the class. Considerable attention is paid to lesson preparation; there is a saying that the preparation of the night before the class is acceptable unless the snow has fallen before class starts. Thus, constant adjustment to and daily review of the lesson plan by the teacher is necessary in order to properly address the needs of the children. It is the teacher`s goal to make each lesson an artistic entirety in which parts relate to the whole; and the sum total is permeated with structure, rhythm and purpose to have a favorable and beneficial effect on the children`s learning.

The main-lesson incorporates activities that address the learner`s intellectual-cognitive, aesthetic-affective and practical modes of learning (Clouder & Rawson, 2000). Each lesson is structured to contain a range of the following activities:

- First part – A morning verse, poetry readings (an occasion when students recite their birthday verses creatively written for them by their class teacher at the end of the previous school year; they have to recite it on the day of the week when they

were born, e.g., if a student was born on Tuesday then he performs it on Tuesday), followed by singing, practice with musical instruments, mental arithmetic, and a review of the previous day`s events.

- Second part – Presentation of new material and discussion.
- Third part – Practicing (basic) topic-related skills, individual work, and narrative.

The Class Teacher

The class teacher teaches his or her class for eight years, the same group of children from grade 1 through grade 8, meaning that he or she "grows-up" alongside the children. The class teacher teaches the main morning lesson block every morning, comprising the first two hours of the school day, and sometimes other subjects as well, such as foreign languages, physical activities, music, games, arts and crafts and so on.

The class teacher is the leader of the class and represents continuity throughout the many years of (child) development. He or she functions as the main figure of moral authority, and is committed to ensuring the well-being of the children and cultivating a very close relationship with their parents. Teachers should have autonomy in decision-making but they also need to be critically informed when making these decisions, as Steiner (1976) asserts,

> A curriculum that, from outset, lays down the timetable and all sorts of other things completely eliminates the art of teaching... The teacher must be the driving and stimulating force in the whole education system (p. 163).

Last but not least, the class teacher is the focal point for the learning experience with a class of mixed-ability children representing the community. His or her task is to foster social awareness and cohesion within the class, a process enhanced by the eight-year, long-term

continual commitment continuity involved. The cultivation of social awareness and empathy and the daily experience of individual and group issues being addressed constructively all help prepare pupils for life. Steiner (1967) has a proposition as to how children should be educated:

> We should educate children so that all their concepts are capable of growth, that their concepts and will impulses are really alive. This is not easy. But an artistic education succeeds in doing it. And the children have a different feeling when we offer them living concepts instead of dead ones, for they unconsciously know that what is given [to] them grows with them, just as arms grow with the body (as cited in Rawson & Richter, 2000, p.22).

The enthusiasm of teachers is a moral force that arises out of their own personal development and growth. As Clouder & Rawson (2000) point out, teachers are effective and influential not only in what they know bur equally in who they are and what they stand for.

Based on my past experience as a Waldorf teacher and on my present scholarly work in the field of lifelong learning and adult education, the question to be asked is not "What does the individual need to know and be capable of doing in order to fit into the existing social order?" but rather "What potential does the individual have and what can be developed in her or him?" When this is taken into account, new forces of continuous renewal can be brought into the society.

Dalai Lama XIV asserts that with the realization of one's own potential and with confidence in one's own ability, one can build a better world (Sawyers, 2012). No existing political power, social order or other dominant structure must be allowed to mold any individual or coming generation into its own image in any context.

Paulo Freire was a well-known Brazilian literacy educator who wrote extensively about

the importance of literacy for adult learners**.** Freire (2000) prompts us to act when oppressive elements in society threaten the educational system. He asserts that the right of any individual to a quality education should not be a social ideal but a social necessity. His *conscientizacao* – the concept of critical consciousness, or the ability to perceive social, political, and economic oppression and to take action against the oppressive elements of society – provides an awareness for all educators to regard the present world conditions with critical alertness and inquiry.

It is important for educators to make critically informed choices when they prepare students. Waldorf education allows teachers to do that, but often alternative educational methods are seen as not being contemporary enough, and therefore the need to address changes in communication related to advances in technology is important. To address that critique I draw upon the pedagogy of multiliteracies, which addresses the question of what constitutes appropriate literacy pedagogy for our times.

Chapter 4 – *English Language and the Pedagogy of Multiliteracies*

The Multiliteracies Approach

The key concept of the multiliteracies approach, as it concerns language and education, is to address the central question of what is happening in the world of language teaching and literacy in schools today, and what perhaps should be happening but is not. The world is changing, the communication environment is changing, and in order to keep up with these changes it is appropriate to argue that education, both teaching and learning, should follow suit.

In this chapter I talk about the key concepts of multiliteracies – a pedagogical approach developed by the New London group, a group of American scholars, interested in how new technologies are impacting upon literacy and how these can be woven into teaching practices in schools. First I discuss why literacy? In the second approach, the "what" of multiliteracies applies to the pedagogy of design and multimodality; to develop a theory of transformation as a theory of learning itself and to redesign the modalities of multimodality. Third, the question "how" addresses the limitations of literacy teaching and provides four aspects of pedagogy that serve as knowledge processes. While we need to expand our knowledge of literacies this does not mean that we should get rid of cursive instruction. I argue therefore for a literacy education through social justice approach which involves teaching children a variety of different writing and communication skills.

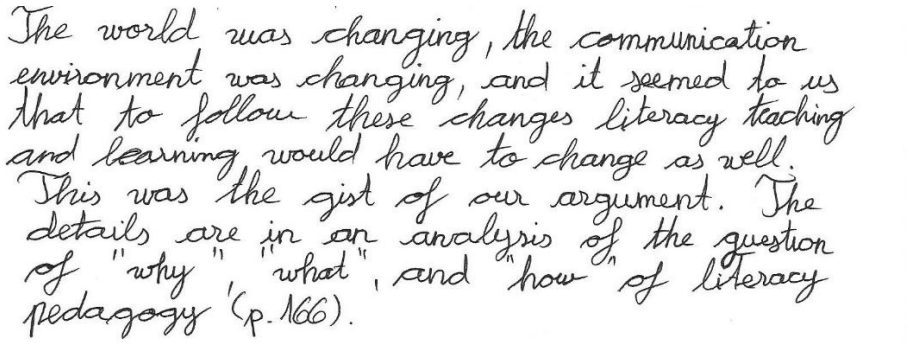
New Literacies

The world of smartphones, blogs, Twitter and iPads comprises some of the space in which representation now occurs. With such communication practices as Twitter (where there is a 140-character limit including spaces and other symbols), new literacies have emerged and become embedded in our social practices, transforming the way we perform our civic duties in

public spaces, reshaping our ways of working and perhaps creating new forms of identity and personality (Reid & Boyer, 2013).

It is paramount that we as educators understand the changes taking place in the world, and the perspective of the pedagogy of multiliteracies approach can provide a useful guide for understanding the practice of teaching and learning. Central to this argument is "the centrality of diversity, the notion of design as active meaning-making, the significance of multimodality and the need for a more holistic approach to pedagogy" (Cope & Kalantzis, 2009, p. 167). Multiliteracies is an approach to literacy that views learning as actively constructing knowledge. The teacher systematically and consciously supports the less-experienced learner, who in turn critiques knowledge and asks questions such as why this text was produced, and whose voice is privileged and transfers a current practice into new contexts and/or adapts the practice to suit new cultural sites. However, it is important that the pedagogy of multiliteracies continuously evolves within the framework of current contemporary circumstances, and, as the critical educator Michael Apple (2006) argues, any new pedagogical innovations unfold within the context of today`s politics of education.

Fundamental to the pedagogy of multiliteracies is the analysis of the questions of "why", "what" and "how" (Cope & Kalantzis, 2009).The discourse of multiliteracies evolved as a way to engage learners, primarily in the grade-school system, by looking at the different kinds of "literacies" that students can develop, including technological as well as more traditional writing or oral literacies. Cope & Kalantzis (2009) explain the reason why they developed the pedagogy of multiliteracies:



In the following sections I provide an in-depth analysis of the "why" "what" and "how" of the pedagogy of multiliteracies approach.

Pertaining to the "Why" of Multiliteracies

To the question of "why", the pedagogy of multiliteracies responds with an explanation of what is happening to meaning-making and representation in the work sphere, citizenship and personal life that might inspire a reconsideration of our approaches to literacy teaching and learning. Cope & Kalantzis (2000) propose two aspects of literacies – the multilingual and the multimodal. Ismail & Cazden (2005) have gone further in this argument when they assert that multilingualism needs a more adequate educational answer in the case of minority languages and the context of globalization. Cope & Kalantzis (2009) assert that discourse differences within a language must be taken into account; key to their argument being the broader interpretation of a language in the context of ethnic, national, professional, interest or other affinity group perspectives. This concept coheres with Gee`s (1996) "social languages" approach where a language has a variety of interpretations. English has become a world language, but it is also diverging into multiple "Englishes" whereas "traditional literacy curriculum was taught to a singular standard (grammar, the literacy cannon, standard national forms of the language), the everyday experience of meaning-making was increasingly one of the negotiating discourse differences" (Cope & Kalantzis, 2009, p.166), and I as a person for whom English is the second

language to my mother tongue can testify to that. The pedagogy of multiliteracies would need to address this as a common occurrence in contemporary teaching and learning.

The "why" of multiliteracies raises questions of equality and equity in a number of ways, which tend to be taken up differently in educational discourses according to different political viewpoints regarding the purpose of education. I draw upon Apple`s (2006) argument to assert that the "left" and the "right" of the political spectrum remain miles apart from each other with regard to the appropriate role of literacy learning in society, and, indeed, the educational perspectives are vaguely characterized. As Apple asserts:

> The sphere of education is one in which the combined forces of neoliberalism and neoconservatism have been ascendant, moving across regions, national systems, and institutions. The social democratic goal of expanding equal opportunity (itself a rather limited reform) has lost much of its political potency and its ability to mobilize people" (p.22).

Indeed Apple`s concern over "falling standards, dropouts, and illiteracy "and "increasing marketization and tighter control through centralized curricula and national testing"(p.22) in the educational system is somewhat addressed by Cope & Kalantzis` (2009) pedagogy of multiliteracies, which argues that:

> [Although the two political sides remain poles apart], there is no dispute that education provides access to material resources in the form of better paid employment; it affords an enhanced capacity to participate in civic life; and it promises personal growth. Upon education still rests one of the key promises of modern societies (p.167).

According to Apple (2006), people on the right call this promise "equity", meaning the world is inevitably unequal. On the other hand, as Cope & Kalantzis (2009) point out, education is also people`s "opportunity" to become anything they wish, and to succeed on their own terms. Education is free and compulsory, and citizens can accomplish anything if they have the will and the ability, that is. Education is one of the key sources of social equity (Kaur, 2012). Some people on the left, however, may argue that the goal of education is equality. As McKay-Panos (2002) asserts, equality is one of our most significant rights, and Brighouse, Howe, Tooley, & Haydon (2010) make it clear that it can be achieved through the ongoing struggle to reduce the gap between the rich and the poor, between the haves and have-nots.

Reflecting on this in terms of localized educational practices, we often see compensatory programs as remedial curricula for schoolchildren in need, various support initiatives such as the Individual Program Plans (IPP) in Nova Scotia for those who have been "left behind" (novascotia.ca, 2014), and the special efforts made in schools in poor neighborhoods, such as The Pathways to Education Program, in Spryfield, Halifax, Nova Scotia. Thus education is seen as some kind of vitamin pill doing good for the system (Plumb, Leverman, & McGray, 2007), yet no matter what the rhetoric is, equity or equality, education continues to fail to meet these promises. The gap between the rich and the poor is growing (Kenny & Robey, 2015), and even when poor people become less poor, it is rarely because their education has improved (Cope & Kalantzis, 2009). Perhaps it is worth reconsidering the narrative that education can be an instrument of change that ameliorates the ills of society. Nevertheless, proponents of both the "right" and the "left" continue to make such promises.

Kalantzis (2006a) reiterates that our political leaders continue to claim that education is pivotal to social and economic progress. This narrative is expressed in the rhetoric of the "new

economy" and "knowledge society". Business leaders are also telling us that knowledge is the key factor in and fundamental basis of competitiveness at the level of the individual, the corporation, and the nation, and that businesses will come to think of themselves as educators and their customers as learners (Davis & Botkin, 1994). Apple (2006), however, points out that this narrative does not translate into greater public investment in education, but Kalantzis & Cope (2006) assert that the importance of education does give greater leverage for educators in public discourse. By encouraging investment in knowledge, educators can claim to be a central part of the "game" of the "new" evolving "knowledge economy", and in the dynamics of today's capitalism it is then possible to create a literacy pedagogy that promotes a culture of flexibility, creativity, innovation and initiative. It is essential that educators (as well as parents and policy makers) develop the ability to think critically about how these different political platforms advocate different kinds of policies that are supposed to support education. Lifelong learning and educational discourses need to implement both the traditional basics approaches and the new, ever-diverging theories that will meet the 21st century adult learner`s needs.

Pertaining to the "What" of Multiliteracies

To the question of "what", Cope & Kalantzis (2009) speak of the need to conceive meaning-making as a form of design or active and dynamic transformation of the social world, and the increasingly multimodal contemporary (linguistic, visual, audio, gestural and spatial) modes of meaning becoming more and more integrated in everyday communication, media and cultural practices. As Cope & Kalantzis (2009) describe: "these constituted the inherent multimodality of contemporary forms of representation" (p.166). In the world of multiliteracies, the traditional emphasis on alphabetical literacy (letter sounds in words, in sentences, in texts, in literature) ought to be supplemented by learning how to read and write multimodal texts that

integrate the other modes with language, such as visual, audio, gestural and spatial modes of meaning. While this proposal is different from the Waldorf approach to literacy because of the attention to incorporating new technologies in instruction, there are similarities in that reading and writing are understood to be learning that occurs within a broader range of sensual or psychological experiences. This is the second essential multimodality analogous with the contemporary forms of representation.

In the pedagogy of multiliteracies, all forms of representation, along with language, should be viewed as an evolving and ever-active process of transformation rather than a system of reproduction. The learner is seen as the meaning-maker who discovers specificities amongst the extremely varied field of relevant texts in order to develop a theory of semiotic transformation as a theory of learning itself. The meaning-makers do not simply use what they have been given; they are fully engaged in remaking and transforming the meaning (Cope & Kalantzis, 2009). Reading and writing occur within a generative context – the learner is creating stories and meanings, which in the Waldorf context means that a mental picture is formed in order to engage the will, stimulate feelings, and establish a relationship with the physical world. The pedagogical implication is that the meaning-maker is recognized as an agent of change, with the potential to create a more productive, relevant, innovative and hopefully emancipatory pedagogy. Meaning-making is an active, transformative process, and the pedagogy based on it is likely to open up new avenues in a world of change and diversity. Kress (2003) and Gee (1996) propose a way to discern patterns and conventions in the representation of the meaning, including modes such as linguistic, visual, gestural, spatial, cultural, ethnic, stylistic, subcultural and professional. Cope & Kalantzis (2009) propose that the conventions of meaning-making be addressed with open-ended questions, such as:

- Representational – To what does the meaning refer?
- Social – How do the meanings connect the persons they involve?
- Structural – How are the meanings organized?
- Intertextual – How do the meanings fit into the larger world of meaning?
- Ideological – Whose interests are the meanings altered to serve? (p.176).

These questions have a cultural and situational context, and through them the learner (meaning-maker) develops new strategies for reading and understanding the new and unfamiliar, no matter what form in which these may manifest themselves. In addressing these questions, the learner – whether a professional or a specialist – may be able to draw upon various "Englishes" to describe the structure or the forms of contemporary meaning and, from these, construct his/her own functional explanation. When we write, cursive or otherwise, we communicate with others.

Cope & Kalantzis (2009) make it clear that in the pedagogy of multiliteracies the act of writing (or reading or making pictures, etc.) is seen as an act of doing something with meaning, and the meaning-maker is seen as an "agent designer". Designing is an act of motivated representation, it is purposeful and directed, and an expression of the individual`s identity "at the unique junction of intersecting lines of social and cultural experience" (p.177). Cazden, Cope, Fairclough, & Gee (1996) identify the moment of design as a moment of transformation, remaking the world by representing the world afresh. One person`s design becomes a potential resource for another person`s creation, and the world is (left) changed as a consequence of the transformational work of designing. In the life of the meaning-maker, this process of transformation is the lifeblood of learning; as Cope & Kalantzis (2009) so vividly put it, "the act of representing to oneself the world and others` representations of it transforms the learner him- or herself" (p. 177).

In the context of multiliteracies there are a number of possibilities when it comes to theorizing or presenting the content and the scope of meaning. Kress (2003) and Cope & Kalantzis (2009) argue that writing – cursive, print or type – is a representation of meaning to another, and reading is a representation of meaning to oneself. Similarly, audio representation (live or recorded speech, music, sound, noises, and alerts) represents meaning to another while listening represents meaning to oneself. Visual representation, as still or moving images, paintings, sculpture, and other works of art, represents meaning to another while viewing these elements from a personal perspective represents meaning to oneself. In the gestural representation that is dance, the movements of hands, arms, and head (including expression of face and eye movement), are understood broadly and metaphorically as a physical act rather than literal movement (Scollon, 1999). The process of shifting between modes and re-representing the same thing from one mode to another is called synaesthesia (Cope & Kalantzis, 2009). Today, synaesthesia is integral to representation; gestures may come with sound, images and texts sit side by side on pages, and shapes and spaces are labeled.

Much of our everyday representational experience is intrinsically multimodal, but meanings expressed in one mode cannot be directly and completely transferred into another. For example, the *Harry Potter* novels can never be the same as the movies, because the visual image can never be the same as the written description of a scene; parallelism allows the same subject matter to be presented in various forms, but the meaning is never quite the same. Parallelism means that one can do many of the same things in one mode that one can do in another, if the written instructions do not make sense at first, study the diagram or view the YouTube video, and suddenly the words start to make sense. The words are understood in the end because the image conveyed meaning that the words could not. Conscious mode switching and thinking

makes for more in-depth learning. Within the discourses of multiliteracies how one engages with reading and writing and the text- whether it is visual, oral, created on screen, or created by cursive writing by hand- changes how one experiences the words and the texts. Having a wider repertoire of approaches enhances the likelihood of better reader comprehension but at the same time, there is also an acknowledgment that some ways of experiencing a text or story will not create the same teaching and learning experience (viewing a movie vs. reading a book) and it will not necessarily be the same experience or develop the same skills or depth of understanding.

Reading a webpage on a computer screen requires considerable navigational effort nowadays. The page is full of written text, but the reading logic follows a more visual structure than one of written language, often with many advertisement pop-ups disrupting our view paths and making our effort to read considerably harder. More tellingly, as former "readers" of books, we have become "users" now that we are on the internet, while unsolicited volumes of data are being downloaded to our computers during web surfing (Szczepański, Wiśniewski, & Gerszberg, 2013).

Cope & Kalantzis (2009), explain that with every shift in the direction of the visual in the new communication environment there are other returns to writing – email, texting or SMS (Short Message Service), blogging, MMS (Multimedia Message Service for sending images with text), Twitter, etc. These forms are not simply returns, however; they express new forms of multimodality such as the layout of webpages or blogs or the sending of images or icons with text, and the trend in all of these new forms of writing is the shift away from the grammatical mode of writing to the grammatical mode of speaking. The World Wide Web is built on a multimodal type of grammar. Images, sound and text create a space of interconnectedness where the computer gives more support to the user when integrating and elaborating data in order to

obtain inferences and a global sharing of data. The shared data allow users to link different types of information coming from different sources – the dream of Sir Timothy John Berners-Lee, the inventor of the World Wide Web (Lamandini, 2011).

Written language is certainly not going away; it is just becoming more closely intertwined with other modes, and, in some respects, is becoming more like them. It remains part of a technology that is able to favor the creation of spaces (LinkedIn, LinkedIn Premium, MySpace) in both sets of interconnected and shared data that allow users to link different types of data coming from different sources. The LinkedIn platforms claim to provide significant information among its (paying) members. It is a platform where various sectors such as education and training, research, the business world, public information, tourism, health, even government information are coming together to provide professional connectivity and career opportunities for users. It is a "technology activated social transformation" (Lamandini, 2011, p.1) site, a space where people make connections, help others, and ultimately, help themselves (Alba, 2007).

Pertaining to the "How" of Multiliteracies

In response to the question of "how", Cope & Kalantzis (2009) analyzed the limitations of both traditional literacy teaching, which set out to address language rules and establish good practice from literary models, and progressivisms that considered the natural learning models that worked for oral language learning to be an adequate and sufficient model for literacy learning. Cope & Kalantzis (2009) suggest that literacy education in the pedagogy of multiliteracies "would involve a range of pedagogical moves, including both 'situated practice' and 'overt instruction' but also entailing 'critical framing' and 'transformed practice'" (p.166). In this context, learning takes place in the same place as it is applied (such as workshops, kitchen,

greenhouse, etc.), and teachers encourage learners to think, understand, interpret, negotiate, and apply their ideas, to focus on important features of the "classroom" task in order to gain experiences that allow them to understand various explanations and to engage in conversations that transfer ideas from one (cultural) situation to another.

One kind of answer is to go back to basics. It is a move that succeeded over the course of the 20th century in slowing down the progressivist curriculum reform that began with the influence of Italian educationalists Maria Montessori (see Montessori schools) and Austrian philosopher Rudolf Steiner (see Waldorf or Steiner schools). Another kind of answer is to move forward and redesign pedagogy for our changing times. I argue that both approaches should come together because I see possible linkages and insights from both traditional schools such as Waldorf and more current literacy debates, such as the pedagogy of multiliteracies, which could create a curriculum that addresses and provides answers to the needs for the 21st century learner.

In terms of learning to write in both cursive and print, Kres (2003) points out that it is about forming an identity. Cope & Kalantzis (2009) argue that some learners can easily work their way into it and others cannot, and the difference has to do with social background. Learners who do not come from a culture of writing often fail in school. Perhaps these learners might have been able to extend their repertoire of writing if they had been introduced to the practice via another mode or entry point to literacy, such as synaesthesia, which is more intellectually stimulating and motivating, rather than the old- fashioned literacy teaching, which concentrated on skill and drill.

Meanwhile, as educators we are supposed to create learners for the knowledge economy, for new workplaces that place emphasis on creativity and self-motivation. The back-to-basics people may be misreading what society needs in terms of education; as Apple (2006) so

eloquently put it, it is neoliberal education on the cheap. He argues that easy-to-measure tests and outcome-based education is something the electorate is willing to pay for, but anything more than the basics is only for those who can afford it. By contrast, the pedagogy of multiliteracies recognizes that "the process of designing redesigns the designer"(Kalantzis, 2006b, p.184). Learning is a process of self-recreation, and is characteristically transformative.

To this extent, the pedagogy of multiliteracies enhances the experience of learning, and its transformative pedagogy is based both on an emancipatory view of attainable paths to improvement in our human condition (how can we make our world a humanly better place in terms of equality, environment?) and on a realistic view of modern society (how does schooling offer feasible cultural and material access to its institutions of power?). A transformative pedagogy could be used to support both arguments and allow the learner to make of the pedagogy what he/she will, whether that may be the issue of the environment, poverty, cultural existence or existential meaning (Kalantzis, 2006a).

The transformative pedagogy of multiliteracies recognizes four aspects of pedagogy that act as "knowledge processes": experiencing, conceptualizing, analyzing and applying (Kalantzis & Cope, 2005).

- Experiencing is a situated and contextual human condition. Gee (2004) asserts that meanings are grounded in real-world patterns of experience, subjective interest and action (as cited in Cope & Kalantzis, 2009). Often there is movement between experiences, like the one between school learning and out-of-school experiences for instance. There are two kinds of experiences: experiencing the known, and experiencing the new. When we reflect on our own interests and perspectives and events from our past, we bring in our own diverse knowledge

and interpretation, hence we experiencing the known. When we are observing something unfamiliar, reading a book for instance, we are exposed to something new, hence we are experiencing something new.

- Conceptualizing is a knowledge process in which learners become active concept creators, making the tacit explicit and generalizing from the particular. It is based on a finely-tuned thinking process in which concept and theory have distinct roles. We can conceptualize by naming, which incorporates categorizing, making distinctions or differences. Here learners give abstract names to things and develop concepts (Vygotsky, 1962). Vygotsky argues that we can also conceptualize with theory, meaning we make generalizations and put key terms together into interpretive frameworks. We build abstract frameworks and mental models, therefore we are active concept and theory makers. We can move from Vygotsky`s world of everyday knowledge into Piaget`s (1953) concrete and abstract thinking.
- I draw upon Brookfield (2005) who provides a relevant reasoning when he explains that analyzing is about the critical capacity of being able to be functionally analytical and to be evaluative with regards to the relationship of power. We can analyze functionally (meaning that we can reason), we can draw relationships between causes and effects, and we can develop a chain of reasoning and explain patterns in text. We can analyze critically, that is we can evaluate other perspectives, interests and motives. Kalantzis & Cope (2005) point out that we can also question the meaning behind actions or thought processes.
- Applying appropriately involves the application of knowledge and understanding

> to the complex diversity of real-world situations and testing their validity. Applying creatively entails making intervention in the world that is innovative and creative and which activates the learner`s aspirations, enthusiasm, and interests. This process is making the world a better place, making the world anew (Kalantzis & Cope, 2005).

This list of aspects can be extended by teachers but those applying these practices may be faced by greater barriers than expected. The one-size-fits-all approach must be curtailed, and we as educators must face and encounter the vast array of human differences that we simply cannot ignore any longer – including those of culture, religion, gender, sexuality, dis/ability, class, and life experience. Cope & Kalantzis (2009) explain that if we are not dealing with *difference* we exclude those who do not fit the norm.

> It also means ineffectiveness, inefficiencies and thus wasted resources in a form of teaching that does not engage with each and every learner in a way that will optimize their performance outcomes. It even cheats the learners that happen to do well…by limiting their exposure to the cosmopolitan experience of cultural and epistemological differences so integral to the contemporary world (p.188).

The pedagogy of multiliteracies allows alternative starting points for learning, alternative forms of engagement, and different modalities in meaning-making. It also reflects on the rebalancing of agency (the capability of individual human beings to make choices and act on these choices in a way that makes a difference in their lives) in the recognition of active "design" and inherent learning possibilities in the representational process (Cope & Kalantzis, 2000). A transformative pedagogy allows for alternative pathways and corresponding destination points in learning (Kalantzis & Cope, 2005).

Many people are left out in the new economy; a pedagogy of multiliteracies may go a long way toward creating the conditions for critical understanding of the discourses of knowledge, power and career from which genuinely more egalitarian working conditions might emerge (Gee, Hull, & Lankshear, 1996; Kalantzis, 2004).

A rich and a broader approach to literacy learning is necessary to better prepare learners to engage and learn effectively in a quickly changing and complicated society. Chapters 3 and 4 have addressed how theorists consider taking into account learning as a rich social, artistic and aesthetic experience, and now I turn to the cognitive, psychological approach by examining brain-based research. Brain-based research adds evidence to the argument that when people learn literacy skills different strategies for engaging with reading and writing foster different types of learning experiences.

Chapter 5 – *Brain-based Research*

In an era of increased technology, questions about the future usefulness of handwriting skills are raised with the possibility that typing on keyboards will replace handwriting. In Waldorf education, the value is on the autonomy of individual human thinking. The learning content is not conveyed to the students in a purely top-down fashion, rather autonomy in thinking and individual processes of understanding are resolutely exercised. Today such demands are often regarded as having been met long ago and thus may seem outdated, for contemporary teaching methods are quite clearly aimed at the students` self-motivation. Among the most popular methods are discovery learning, action-centered education and approaches to teaching arising from the results of brain research. Cursive writing is not immune to this kind of examination.

While there appears to be little research that presents evidence of the unique importance of cursive writing, the broader heading of handwriting (which would in effect include both printing and cursive) has been the subject of some very interesting scientific studies that suggest that there are more benefits to it than we have thought. Consequently, in this section I present arguments that teaching both of these handwriting formats has great advantages for the developing child, specifically by enhancing brain activity, and thus should remain part of our education system. Adults as educators, parents and policy makers need to make decisions around curriculum by being critically informed about the importance of neural development linked with cursive writing. Educators need to be aware that determinations made today will affect learning that continues on throughout adulthood. In the following sections I describe five relevant studies carried out by Stavangeri University (Trond, 2011), Dr. Stanislas Dehaene (Dehaene & Cohen, 2011), Dr. Karin James (James & Engelhardt, 2012), Dr. Virginia Berninger (Berninger, Abbott,

Jones, Wolf, Anderson-Youngstrom & Apel, 2006 and Berninger, Richards & Abbot, 2009) and Planton, Jucla, Roux & Démonet (2013) that examined the impact of handwriting experience on functional brain development.

The Effects of Handwriting Experience on Functional Brain Development

Recent research carried out at the Norwegian Stavangeri University (Trond, 2011) confirms that humans process and retain information better if they write it down. Two groups of adults were given the task of learning a hitherto-unknown alphabet consisting of 20 letters. One group recorded the material to be studied using a keyboard, the other used handwriting. A few weeks later, the participants wrote a test on the material. Results showed that those who had recorded the new material in handwriting scored better than those who had typed it. The adults were also subjected to computerized tomography (CT) examinations, and in the case of those using handwriting, the Broca area of the brain – which is the motor center for speech in humans – showed greater activity. Such increased brain activity was not noted in the case of those study participants who used computers. This suggests that when we use handwriting, our brain gets feedback through the movement of the hand and fingers, and through the process of word acquisition or reading. This feedback is stronger than what we get when typing, thus it is more effective in supporting the acquisition of various skills.

The Dehaene Study

According to Dr. Stanislas Dehaene (Dehaene & Cohen, 2011),a psychologist at the Collège de France, the automatic and continuous activation of this brain circuit when we read or use handwriting makes the process of learning easier. Dr. Dehaene and his colleagues assert that brain imaging as well as intracranial recordings, and even 19th century neuropsychology, have long associated written word recognition with the left *fusiform gyrus*. The left fusiform gyrus,

also known as the left lateral *occipitotemporal sulcus*, is the area labeled as the Visual Word Form Area (VWFA) and is claimed to be especially, or even selectively, responsive to words. The research explored how stimulus type, such as reading or writing by hand, and task demands affect activity in this area. Capitalizing on recent functional magnetic resonance imaging experiments (fMRI), Dehaene & Cohen (2011) provide strong and substantial evidence for the hypothesis that reading acquisition partially recycles a cortical territory evolved for object and face recognition, the prior properties of which influenced the form of writing systems. The use of the word recycling refers "to the educational changes that occur in developmental time and without any change in the human genetic make-up" (p.254).They point out that the recycling hypothesis does not presume any novel form of learning or plasticity, but it accentuates the plastic neural changes that do occur in the context of strong constraints imposed by the prior evolution of the cortex. In other words, the cultural form of writing must have evolved in accordance with the brain`s learnability limitations, converging progressively on the "set of symbol shapes" (p.254) that can be optimally learned by these particular brain areas. Dehaene & Cohen (2007) assert that handwriting evolved as a recycling of the ventral visual cortex`s competence for extracting configurations of object contours, that is to say that the visual system relies strongly on the pattern-forming contours of objects projected on the retina. These patterns, as described by Biederman (1987) and Binford (1981), provide essential information about objects, shapes and spatial relations. Biederman (1987) offers a further, more scientific explanation when he asserts that the *T* junction in the letter *T* for instance often signals obstruction of a surface by another; however, the visual system relies heavily on these particular line junctions in order to recognize objects, particularly line drawings. This scientific explanation aligns well with the Waldorf method of teaching cursive, when the progression from pictorial

representations of the letters to formal writing encompasses the practice of the shapes of capital letters that are presented to the children embedded in an artistic drawing (e.g., letter *T* is created based upon a drawing of a tree). The attentive and diligent practice of drawing and writing the letter *T* may play an important part in strengthening the children`s "world of writing". My son`s drawings of a tree demonstrates the point (Figure 4):

Figure 4: T as a tree and T as a letter

The James & Engelhardt Study

Dr. Dehaene's claim that the brain circuit activated when we write by hand makes the process of learning easier was supported by Dr. Karin James (James & Engelhardt, 2012), a psychologist at the University of Indiana. She argues that brain activation during letter perception is influenced in different, important ways by handwriting letters versus typing the same letters. Only after handwriting is a certain "reading circuit" documented during letter perception – not after typing or tracing experience. James & Engelhard`s (2012) findings demonstrate that handwriting engagement is important in early recruitment of letter processing in brain regions mentioned in the section above, known to regulate successful reading. Handwriting therefore and certainly cursive may facilitate reading acquisition in young children.

The experiment involved children who could not yet write or read. They were shown print letters and shapes on cards, and were asked to reproduce them in one way or another. The children were offered three choices to reproduce the characters on the cards: they could draw them, type them on a computer, or draw them along dotted lines. Following this step, the children were shown the letters and shapes again, while their brain activities were monitored. Researchers found that the way the copying was done fundamentally affected the neurological results. When the children were drawing a character freely, three areas in their brains were activated that work while adults are reading and writing. These three areas are: the left elongated gyrus or inferior frontal gyrus, also known as the Broca (mentioned above); the lower frontal lobe gyrus; and the rear part of the parietal lobe (Fadiga, Craighero, & Roy, 2006, pp. 137-152). However, in the case of the children who merely typed in the letters or followed the dotted lines, very little or no neurological activity was detected in these same areas. James & Engelhardt (2012) assert that the cause of the difference lies in the coordination of free handwriting. Not only do we need to plan and implement an activity, but the results obtained may be quite varied, too. This variety itself may be seen as a kind of learning tool. In the beginning, a child produces letters and shapes that are hard to recognize; after some practice, however, the symbols written begin to resemble more and more those seen on the cards. In the meantime, the child also learns, for example, that the meaning of a word or identity of a letter is not altered by different handwriting.

The James & Engelhardt (2012) study concluded that:

- The left *fusiform gyrus*, the area responsible for reading and letter processing, is recruited more after handwriting than experience in typing, tracing or simply perceiving letters.

- There is activation in the right *anterior fusiform* that is specific to drawing and tracing letters as well as drawing shapes.
- Activation in the left *fusiform gyrus* was a result of motor experience. This region was more active during manuscript experience than typing suggests that there is something about handwriting *per se* that changes visual processing to letters.
- The visual processing of letters is affected by a specific motor experience – the act of writing a letter.

Interestingly, a middle frontal region called Exner`s area, the locus actually involved during writing in adults (Katanoda, Yoshikawa, & Sugishita, 2001), was not recruited during letter perception in the James & Engelhardt (2012) study. A study similar to that of the latter researchers, but carried out with the participation of adults, has shown increased activation in the Exner`s area during letter perception (Longcamp, Anton, Roth, & Velay, 2003). It is possible to assert therefore that the Exner`s area of the brain is either not used when the young child writes the letter or is not activated, perhaps because the child does not have writing experience.

Learning to write letters is difficult for children; they must use their undeveloped and immature fine-motor skills to embrace a series of writing strokes for each character (Longcamp, Zerbato-Poudou, & Velay, 2005). The child must learn the exact location and orientation of strokes, but must also perceive that other features such as size and slant are not important attributes to identify a letter. Understanding all this is not an easy task, and handwriting may be an entry point through which children learn the characteristics of letters that are important for successful categorization (Babcock & Freyd, 1988). Thus, as James & Engelhardt (2012) argue, the construction of letters stroke by stroke helps children understand the important aspects that

define a letter. It is important to point out here that although the motor tasks of writing print and tracing are similar, the processes that take place prior to the motor act as well as the output of the motor act are both quite different, although very crucial in terms of identifying letters. The results show that letter perception is facilitated by the handwriting experience, and it further indicates that handwriting experience is important for letter processing in the brain.

The conclusion of James & Engelhardt`s (2012) research is that when we write, a particular neural circuit is automatically activated. There is a core appreciation of the gesture in the written word, a sort of recognition by mental stimulation in our brain. As well, it seems that this circuit is contributing in unique ways of which we have been unaware, and that there is something extremely significant about manually manipulating and drawing out two-dimensional things. The researchers hypothesize that even adults may benefit similarly when learning a new graphically different language, such as Mandarin, or symbol systems for mathematics, music and chemistry. In the James & Engelhardt (2012) study, adults were asked to distinguish between new characters and a mirror image of them – after producing the characters using pen-and-paper writing and a computer keyboard. The findings were that for those writing by hand, there was stronger and longer-lasting recognition of the characters' proper orientation, suggesting that the specific movements memorized when learning how to write the graphic shapes helps the participants later identify them visually.

The Berninger Study

Dr. Virginia Berninger, educational psychologist at the University of Washington and an authority on the subject, reveals that the active use of handwriting goes beyond recognizing letters. During her research with primary-school children, results showed that cursive writing, print writing, and typing were connected to various brain function patterns, and these individual

patterns produced various end results. When children wrote a text using cursive writing, not only did they write the individual words faster onto the paper, but they also came up with more varied ideas than their peers who used a computer. The experiment also showed that the areas of the brain responsible for working memory (short-term memory) were more active in children with a more sophisticated handwriting (Berninger et al., 2006; Berninger, Richards & Abbot, 2009).

A difference similar to the above was shown in the brain activities of those using print versus cursive writing. As Berninger et al. (2009) explain:

> A series of brain imaging studies compared 11-year-old good and poor writers during idea generation (Berninger et al., 2009), spelling, which enables idea translation and expression (Richards, Berninger, Fayol, 2009 [J Neuroling]), and sequential finger movements, which enable handwriting that supports the transcription of written words to express ideas (Richards et al., 2009 [Clin Exp Neuropsych]). The most surprising result was that during the functional Magnetic Resonance Imaging (fMRI) contrast between finger sequencing and finger repetition, after controlling for multiple comparisons, good and poor writers showed robust differences in Blood Oxygen Level Dependent (BOLD) activation in 42 brain regions associated with cognition, metacognition (executive functions), language, or working memory (Richards et al., 2009 [Clin Exp Neuropsych]). Thus, serial organization of finger movements may engage the human mind and cognition – hence the notion of hands-on-engagement in learning (pp 77-93).

For finger sequencing the child tapped the thumb and each of the four fingers in order, beginning with the thumb and proceeding in sequence to the index finger, to the middle finger, to the ring

finger, to the pinky, and then repeated the sequence at a steady rate practiced as many times as possible within a 30-second time limit. For finger repetition or finger tapping, the individual touches the thumb with each finger in sequence or touches the same finger to the thumb repeatedly. Wolff, Gunno, & Cohen (1983) explain imitative finger tasks for assessing serial organization of finger movement. The number of taps (20) is held constant across two tasks, which vary as to whether the individual touches the thumb with each finger in sequence or touches the same finger to the thumb repeatedly. Both tasks, which are performed out of view without any visual cues, require execution of a motor act involving thumb and fingers but differ in whether planning sequential finger movements, that is serial behavior, is involved.

Fingers may play a special role in idea generation and expression by, as Lashley (1951) explains, enabling the serial organization of behavior that manages human cognition. The study of Berninger, Richards & Abbot (2009) has shown that BOLD activation during fMRI finger sequencing contrast correlated convincingly with handwriting and spelling but it might also correlate significantly with the written expression of ideas. This would support Lashley`s (1951) assertion that serial organization is the core of human thought and cognition, particularly when it comes to expressing them in writing.

The important finding of the Berninger, Richards & Abbot (2009) research is that during handwriting, be it cursive or manuscript, at least five regions of unique brain activation are consistently associated with all three behavioral measures of writing – written expression of ideas, automatic legible handwriting, and spelling. This pattern of findings suggests that these five brain regions may support the serial organization of writing behavior and thus serve collectively as a writing center. These five regions are:

- *Left inferior temporal* region is associated with phonological and morphological

word-form storage and processing and semantic activation that link language with cognitive representations underlying words.

- *Left superior parietal* region is associated with phonological working memory, letter writing, and spelling.
- *Right precuneus* and *right inferior temporal* regions are associated with orthographic and morphological word-form processing.
- *Right inferior frontal orbital* is associated with executive functions and cognition.

When cursive writing is undertaken, the brain`s *left superior parietal* region is activated, while only one region, the *right cerebellum*, correlated significantly with automatic letter writing by keyboard.

Based on the above-mentioned research, Dr. Berninger and many other experts in this field recommend that schools create learning environments that support not only language (syntax)-based thinking but also translation of ideas in non-syntax format – as in poetry, art, music and evolving forms of technology. In terms of teaching handwriting, Berninger (2013) suggests the notion of being multilingual by hand, the ability to write both in cursive (as is the instructional practice in Europe) and print (as is the instructional practice in the United States). She points out that children encounter manuscript fonts more often than cursive fonts in reading hardcopy books or written texts on computer monitors or in e-book readers. Cursive connects all the letters within a word with connecting strokes and facilitates attention to all the letters in a word, thus improving spelling and the speed of writing and reading. She asserts that teaching both handwriting formats has advantages, including learning to recognize and write letters despite small variations in letter forms sharing the same name. Berninger (2013) explains that during early childhood, writing letters improves letter recognition, and teaching handwriting

leads to improved reading. But studies also found that when it comes to speed of composition, handwriting (which requires only one hand), lost its relative advantage over keyboarding (which requires coordination of two hands) during early adolescence, when imaging shows frontal brain regions support more efficient cross-hand coordination. She assesses it as follows:

> The handwriting advantage in speed was observed only during composing texts. The keyboard had an advantage for writing the alphabet in order. It may take less time to find and press letters than form letters stroke-by-stroke. No differences were found in accuracy or time for composing isolated sentences in handwriting and keyboarding. So handwriting's advantage may be related to sustaining writing for a first draft. During middle childhood, written composition, spelling, and alphabet writing (by handwriting, but not keyboarding) predicted brain activation in five regions while tapping fingers in sequence from index to baby finger. Forming letters stroke by stroke by one hand may draw on different processes than alternating two hands and all fingers to operate a keyboard (p.1).

These examples indicate that learning to write by hand clearly stimulates brain activity and engages cognition, but it is also a motor process. Forming letters requires fine motor movements of the wrists and fingers, as well as hand-eye coordination (Berninger et al., 2006). O`Hare (2004) provides evidence that cursive writing activity especially involves fine motor skills, control and concentration, and a number of theorists, including the philosopher Merleau-Ponty (1962) and the psychologists Piaget (1953), Held (1965), and Neisser (1976), have emphasized the importance of motor activity, including exploratory activity, in perception and cognitive development. This observation falls in line with the results of the Norwegian research (Trond, 2011) mentioned above; when we use handwriting, our brain gets feedback through the

movement of the hand and fingers. This feedback is stronger than what we get while typing, thus it is more effective in supporting the acquisition of various skills.

The Handwriting Brain

Another relevant psychological theory of learning is that of Planton et al. (2013), entitled the "handwriting brain". This group of researchers compared the results of more than two dozen studies conducted between 1995 and 2012. The studies analyzed the relationship between digital text processing, handwriting and the working of the brain using the most modern procedures available, including functional Magnetic Resonance Imaging (fMRI) and positron emission tomography (PET).The languages studied were English, Japanese, German, French and Czech. Only studies involving healthy participants were selected, and a total of 229 participants were involved. Results from the main meta-analysis (a statistical technique for combining the findings from independent studies) allowed researchers to identify 12 cortical and sub-cortical functional regions involved to different degrees in written spelling tasks.

Specific Areas

The data collected indicate that three regions remain reliably and repetitively activated during handwriting, whatever the nature of the control tasks used (motor or linguistic): the *left superior frontal sulcus* (SFS)/*medial frontal gyrus* (MFG) area, the *left intraparietal sulcus/superior parietal* area, and the *anterior cerebellum* (Planton et al., 2013). Thus, it can be presumed that these areas support cognitive processes specific or at least crucial to handwriting. This agrees with the study by Sugihara, Kaminaga, & Sugishita, (2006), which identified the posterior end of the *superior frontal gyrus* (SFG) and the anterior part of the left *intraparietal sulcus* (IPS) as the central processors of writing, the writing centers. Planton et al. (2013) do point out that the issue of the particular role of these areas and their actual specificity to written

language remains to be confirmed in further studies. The activation of the *parietal cortex* seems to peak when literary tasks are performed, such as pen and paper writing (cursive or print), typewriting or imagined writing with or without visual feedback. The posterior part of the IPS also shows very high activity when writing occurs; from this, Planton et al. (2013) conclude that "the superior *parietal cortex* may be particularly involved in the selection or representation of letter shapes but, more specifically, plays a role of a high-level interface between motor and language areas during the act of writing" (p.15).

The study by Nakamura et al. (2002) identified an area in the left *fusiform gyrus*, near the inferior *occipito-temporal* junction as the locus reliably activated when Japanese characters are written. Other research (Nakamura et al., 2000) asserts that this area is also involved in the retrieval of visual graphic memory because it is activated by actual writing but not oral reading. A similar study carried out by Rapcsak & Beeson (2004) presented similar findings with European alphabet writing systems.

The research of Planton et al. (2013) has also described inconsistent brain activity in the right hemisphere, from the *inferior frontal* to the *superior prefrontal* region and in the area located at the rear end of the right middle *frontal gyrus*, close to the *precentral sulcus*. In these locations, peaks of activity were recorded during various tasks, all of which included right-hand writing. The fact that this peak activity emerges in the right hemisphere due to right-hand activity needs further exploration, to provide a better understanding of the nature of the left counterpart performance.

In summary, neuroimaging was used in different paradigms to study the neural correlates of handwriting. The results of this meta-analysis address the point that an essentially left-hemisphere network is recruited for various handwriting tasks, with different languages and

different writing systems. Two frontal and parietal superior areas appear to be crucially involved, while frontomedial, precentral, frontal inferior, temporal posterior, thalamic and cerebellar regions contribute at different levels, from orthographic selection to motor execution. Planton et al. (2013) assert that "the design of experimental and control tasks is obviously critical if the role of each component of this cerebral network is to be clarified and future research should develop paradigms consistent with the specific cognitive processes targeted"(p.29).

So we know that certain parts of the brain are engaged and light up (mostly the left side of the brain, helping to make strong connections to the right) when one writes by hand. It helps develop small muscle control and confirms that practice is an important part of expertise, an inconvenient but vital fact of life that helps us build to the concept that the end does not justify the means. Learning handwriting encourages patience and persistence, both important skills necessary in life. It might be useful to know for everybody concerned that doing something more than once improves the end result, and that learning takes times and effort. As pointed out earlier in this section, handwriting creates a different effect in the brain than keyboarding, and a number of Dr. Berninger`s research studies show that sequential finger movements activated extensive regions of the brain involved in thinking, language and working memory – the system for temporarily storing and managing information. Handwriting helps in graphic learning – in recognizing shapes, meaning, and the sequencing of learning. Handwriting is slower than keyboarding, making writing a mindful activity, a chance to pause and think. Are we really ready to lose those advantages to a keyboard? And more specifically, are there certain parts of the brain that are engaged when one keyboards or texts but not engaged during handwriting? This question arose during my thesis committee discussion. I contacted some scientists in the field of neurology and asked them to direct me to relevant research. The research indicated that this

question is still not completely answered; however, I received further proof that from the viewpoint of brain activity for specific motor control, there are almost certainly differences between typing and handwriting. This appears to mean that handwriting and typing involve the same “central spelling components”, but different “peripheral components” (Menon & Desmond, 2001). Handwriting and typing probably “light up” the same general regions of the brain (specifically the left parietal and superior frontal sulcus) but perhaps to different degrees or with somehow different patterns within these brain regions. Further studies are needed to answer this question.

Conclusion

The French analysis found that the act of writing by hand activates fine-motor movement centers in the brain that are different from those used when one types (or sews, knits, or does DIY activities as suggested by other studies). Moreover, handwriting triggers brain areas responsible for word processing (and thus spelling), comprehension, sound formation and other linguistic tasks. Typing does not stimulate these areas, or does so only to a limited extent. What is more, the mathematical and musical skills of those who learn only typing at school develop to a lesser extent. In short, handwriting:

- increases brain activation
- benefits motor skills development
- increases the ability to compose ideas
- enhances idea composition and expression
- improves performance across all academic subjects (spelling)
- provides a strong foundation for higher order thinking skills such as creating, evaluating, analyzing, applying, understanding, and remembering

- helps achieve goals throughout life

From my experience, teaching handwriting to children is primarily a process of concentration during which children acquire the schema presented by their teacher. The mechanics of writing start to become automatic around the ages of 9 and 10, or grade 3. At this stage, children's attention will shift from forming the letters to formulating the intended information. Using handwriting means trusting more in their problem-solving skills; without the external help of a word processor, children need to do their own spell-checking and editing alike. Since correcting mistakes on a paper page almost always leaves some physical trace behind, handwriting is a more responsible activity and requires greater concentration than when someone works on a computer. Many graphologists believe that people who regularly write with their hands are more creative and are more sophisticated communicators, because their verbal expression skills develop through their handwriting (Stvorecz, 2014). Stvorecz also notes that handwritten diaries are often recommended for therapeutic reasons, since individuals tend to gather their thoughts more clearly in the written form, which may help in understanding the individual`s own role in a particular situation.

The possibility that typing on a keyboard will eventually replace handwriting raises questions about the future usefulness of the latter skill. Proponents of cursive, however, can rest assured that since science provides a significant element of support, namely that handwriting is good for the brain, why not teach cursive? If nothing else, the spread of digital tools such as tablets suitable for taking handwritten notes may gradually resolve the issue and allow cursive to survive after all.

Fostering creativity and holistic approaches have strong links with learning and knowledge as pointed out in the Waldorf (Chapter 3) and the pedagogy of multiliteracies

(Chapter 4) sections. Educational actors need to have a clear awareness and understanding of this reality so that knowledge can thrive in any learning environment. However, as I move on from this chapter I believe that it is important that I analyze and critique the context in which my arguments are situated: the neoliberal paradigm.

Chapter 6 – *Neoliberalism*

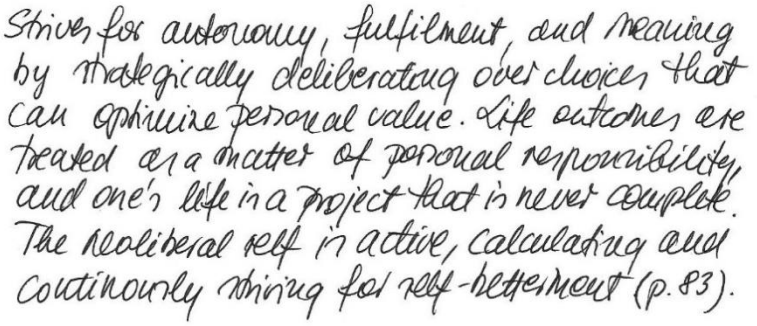
In this chapter I look at the influence of neoliberalism in shaping educational decision-making, focusing particularly on the question of whether or not cursive writing should be included in the school curriculum. To do this I define neoliberalism, explain how neoliberalism is impacting educational discourses (for example – around the matter of choice), then discuss why the "choice" in a neoliberal environment might be to do away with cursive writing. I also argue that educators need to be critical of the limitations imposed by decision-making within a neoliberal environment to take a more holistic approach towards understanding the value of different kinds of learning.

Choice and Decision-making

Critical educators who have written about neoliberalism focus on the way decisions that affect policies and pedagogies are influenced by the belief that schooling is primarily about preparing people to engage in the paid workplace. In this context, handwriting is devalued because it is not needed in the market place. Cursive writing is taken out of the curriculum because it is not regarded as a necessary skill in the neoliberal paradigm. In the neoliberal environment decision-making and choices are made under (un)certain conditions, therefore it is important that we consider scrutinizing the factors that shape the decision-making process in educational curriculum. To put this in an animated neoliberal way: there is a risk involved in learning cursive – it is a waste of time as it is an unemployable skill. Beck (1992) states that risk perception evolves, and varies with time and culture depending on many factors, but as Korstanje (2009) states, risk "almost always retains essential features related to the construction of hegemony" (p.150).

There is an alignment between choice and neoliberalism, which is a contentious ideology implicated in generating inequality, promoting radical individualism and eroding democratic responsibility. Neoliberalism is an economic and social environment resulting from the idea that prosperity and well-being are achieved when structural arrangements operate in terms of free-market principles, which are to protect and increase competition, maximize choice and liberate entrepreneurial freedoms. Although generally understood as an economic rationale, neoliberalism favors the kind of individual who is only valued and validated within institutional settings. As Gouthro (2009) states, "individuals must be versatile in determining their learning pathways, with democracy presented as the freedom to make choices to survive and thrive within the global economy" (p. 159).

Critical theorists argue that neoliberal arrangements can work only through neoliberal subjectivity (Apple, 2006), which is referred to by Foucault (2008) as *homo economicus*, by Cole (1989) as an entrepreneurial self, and by Delfgaauw & Dur (2010) as a managerial self, called "best and brightest". Drawing from these remarks, the individual in this case is referred to as the wise choice maker. The neoliberal wise choice maker is a rational competitor in the marketplace driven by self-interest and self-betterment as pursued and rationalized through an economic logic of productivity and efficiency. Vassallo (2015) alludes to the neoliberal individual as a neoliberal self who:



Although neoliberalism is well-critiqued, all too often the issue of choice remains relatively unchallenged. In the neoliberal context, the individual is seen as the wise choice maker – making wise choices, meaning advancing economically. Part of the critique of neoliberalism is that by conferring/transforming the responsibility for everything onto the individual, any choice that does not advance them somehow (economically, intellectually, socially, etc.) is a bad one. It becomes the individual`s responsibility, and not society`s, to make sure that they have an education that enriches them as a human being. It is this mindset that prevails in our society – the false representation of choice. This creates a tension we all have to deal with as educators and as learners. On one hand we have quite a bit of freedom of choice in selection of education, comparatively speaking. We can compare the choices we have to those of our parents or grandparents in terms of future decisions, but the problem is that the choices are often constrained by the social, political, and economic circumstances in which we find ourselves. Neoliberalism tends to not address this point adequately, and thus does not really explain how the onus is totally on the individual since it is implied that "we do have that kind of freedom" when we actually do not. We have these notions of neo and liberal, with "liberal" meaning that we can choose and do things and "neo" meaning "Can we really make those choices?" Olssen & Peters (2005) point out that the two cannot be seen as identical; they explain that,

> the classical liberalism represents a negative conception of state power in that the individual was taken as an object to be freed from the interventions of the state, [whereas] neoliberalism has come to represent a positive conception of the state`s role in creating the appropriate market by providing the conditions, laws, and institutions necessary for its operation (p.315).

In the liberal environment the individual is characterized as having an autonomous human nature

that can practice freedom, while in neoliberalism the state seeks to create an individual that is an enterprising and competitive entrepreneur.

The dominant ideology in the developed world perceives the individual as the ultimate master of his or her life. This is reflected in today's consumer society where the individual is not only perceived as someone who endlessly needs to make choices about various consumer products; but is also supposed to look at his or her own life as a particular "consumer object." Let`s consider some examples of how this omnipresent ideology may permeate our daily lives. During a single day of travel in Halifax, Nova Scotia, I was reminded many times that I am totally free to make whatever I want out of my life: My university, Mount Saint Vincent University, encouraged me with the dictum "Shape your path." A beer company addressed me with an ad that recommended "Be yourself." A travel company attempted to seduce me to take a new trip with the slogan "Pack light, breath deep, be free." When I used a local ATM, the screen informed me that "Richness: is the feeling of free." At a birthday party, I listened to a pop music song entitled "Me, Myself & I." While I was reading my native daily newspaper, *Népszabadság*, online, an advertisement kept popping up saying "I owe it to myself!" and a video screen at a shoe shop told me that "I can do it." Thinking back to my native Hungary in the post-Communist era, I even remember a cell-phone company advertisement that conveyed the message that if I bought a certain phone then I would instantly become myself and free. Corporations pay millions of dollars annually to advertising agencies, which Ewen (1976) calls "captains of consciousness" designed to make us meet our needs, fulfill our heart`s desires and make us happy, or – as in my final example above – make us feel free.

So how it is that in the developed world the apparent increase of choices through which people can supposedly fashion and tailor their lives does not lead to more satisfaction? Salecl

(2009) recognizes that the idea of choosing who we want to be and the imperative to "become yourself" are part of the intricate, delicate web of the ideology of capitalism, called neoliberalism. In the neoliberal environment, it appears that we have all kinds of choices, but in reality this is a false representation. In certain educational contexts, the pressure to create programming that suits the marketplace is increasingly high. A prime example of this is my university`s (Mount Saint Vincent University) motto "Shape Your Path", which sends the message to potential students that if they enroll, their (professional) path can be shaped according to their needs. However, as Gouthro (2009) points out, the influence of the private (business) sector in universities is noteworthy. She asserts that while academics shape the individual careers of their students, they (the academics) are also "coopted by combined influences of the state and marketplace [which in neoliberal context go hand-in-hand]" (p.161). Smyth & Hattam (2000) also worry about the "marketization of academics` work" and they argue for universities to be sites "that nurture critical discourses for enlivening debate in the public sphere about the kind of society we want to live in" (p.157). These critical educators argue that "choice" about selecting appropriate goods and services is too limited an approach for education, which should be about preparing the learner for engagement in all aspects of life – as citizens, parents, not just employees or workers.

There is more choice that ties into learning in preparation for the business workplace, and parents learn that even in their children`s schooling there is an emphasis that shapes the choice. Will this skill be useful in the workplace? Would any employer require good penmanship nowadays? Cursive writing is devalued because it is not something we need for a job; it is not something we need in the marketplace. By not viewing cursive writing as having marketable value or function, and therefore making a decision not to teach or include it in the school

curriculum, educators are actually creating fewer choices. Skills that are not immediately related to getting a job are devalued in the neoliberal context; therefore it is imperative that we consider critiquing it. Gouthro (2009) points out that the main discourses in lifelong learning are influenced by neoliberalism and that the influence of the marketplace is shaping the learning context. Adult learners, therefore, are expected to assume personal responsibility for their learning curve; as Olssen (2006) observes, the responsibility shifts from the system to the individual, which in a sense isolates or disengages the learner. Burke & Jackson (2007) note that this process is a danger to learning opportunities because it becomes a mechanism to control and regulate the citizen "in the context of constant threat of risk" (p.29). I regard cursive writing as an integral part of lifelong learning, if not from cradle to grave then at least from primary school to adult life and I also see this as something that prepares learners for learning later in life.

Burke & Jackson (2007) argue that the field of lifelong learning is un(der)theorized, with further analysis needed in order to "examine the different and competing conceptual frameworks that are currently available, and to consider the ways these constrain or open up opportunities for lifelong learning" (p.9). In addition to pursuing this challenge, I also take aim at the heart of education while actualizing what Habermas (1996) calls essential space for rational discourse. Creating educational spaces in which communication, critical thinking and rational discourse are learned will surely make our society more democratic and weaken the validity of the neoliberal agenda (Murphy & Fleming, 2010). It should be the individual's choice to decide whether he or she wants to be an enterprising and competitive entrepreneur, not that of the neoliberalist state. This dovetails with Burke & Jackson`s (2007) statement, which considers the notion of "learning society" where certain profit-oriented types of learning and particular types of learners are prioritized. Capitalism supported by neoliberal forces created and continues to create a huge

imbalance in terms of social, cultural and environmental perspectives (Plumb, et al., 2007). Plumb et al. (2007) explain that learning in the neoliberal discourse is promoted as if it is the only view, and – more importantly – "the things that are important to learn are identified by expert holders of the most valid and valuable elements of knowledge" (p.44). The fact that a person is able to make choices opens up the possibility for change; however, in the neoliberal environment the notion of choice is a very debatable one. Salecl (2009) asserts that in the capitalist neoliberal context, choice is presented as an endless possibility but actually that is not the case. The overwhelming insistence on choice as a particular way this type of society tries to perpetuate itself makes the individual feel that there is a "buffet" kind of selection of choices from which one can choose at will (P. Gouthro, personal communication, January 22, 2016). In reality that is a false representation!

In certain educational contexts, the pressure to create programming that suits the marketplace is increasingly high. My research intends to highlight the false impression the neoliberal paradigm creates, that we have unlimited choices in terms of learning. When people who are in decision-making positions, whether they are the policy makers or the teachers or school principals, are making decisions around education they are going to influence our children`s life opportunities for learning. So when the decision makers decide that cursive writing is not important, why are they thinking this? What is influencing them? Is this thought process shaped by the neoliberal environment?

The access to choice is also of great concern and may be very limited for women, sexual minorities, immigrants, visible minorities, and persons with ability issues (e.g., hearing impairment) or lower socio-economic backgrounds. Therefore we must understand the importance that educators have in framing choice. They are there – in the frontline – to have a

responsibility to be critical in questioning their assumptions because they are actually in a position to limit people`s learning options, often because they are buying into a neoliberal perspective. What counts as sensible, rational knowledge takes on legitimacy through a supposed hegemonic truth – "cursive writing is not needed" – yet it remains contestable and disempowering for all but dominant groups.

Cultivating the Critical Theory Approach

Critical theory has a mandate to challenge hegemonic beliefs that serve the interests of those in power (Brookfield, 2005) by troubling the status quo. Building on this, I challenge educators and decision makers to reconsider what constitutes valuable learning. By overlooking and devaluing the importance of cursive writing skills (among others) in the curriculum, and by reinforcing the belief that writing by hand is no longer important to learn, we exclude and diminish the possibility for important, in-depth and rich learning experiences. Such experiences are all too important factors in the early developmental stages of human beings as laid out by the Waldorf curriculum, where learning to write cursive permits the student to experience the essential and deep-rooted quality and nature of different shapes and movements. Understanding the inner nature of something, gaining access to things, is one of the basic themes in the Waldorf curriculum and aligns well with the lifelong learning discourse, whereby having access to knowledge through education has the potential to develop a well-balanced human being with healthy moral and social characteristics (Dahlin, 2010).

It is important to examine some of the pathologies of the educational system, but it is equally important to recognize that the neoliberal "package" has been afflicting it all along. As Welton (2005) puts it, "We sacrifice our time, our families, our children, our forests, our seas and our land on the altar of the market, the god to whom we owe our deepest allegiance" (p.189).

Neoliberalism in practice reduces the quality and status of education for many, particularly for those who have no alternative but public schooling. In the neoliberal agenda, education is conceived more as a market than a service provided to citizens. In this mantra, society is created through the market and in theory the state should stay out of social and economic affairs to as great a degree as possible. I remember that in my country of origin, every tax cut, every program cut was made in the name of the neoliberal interpretation of liberty. These developments can be observed in schools as shrinking state funding takes hold (Cope & Kalantzis, 2009). In this context I am very much interested in the notion of choice, because it should be the individual's choice to decide what he or she wants to be, not that of the neoliberalist state. This aligns well with Cope & Kalantzis` (2009) multiliteracies perspective where individuals as meaning-makers do not simply use what they have been given, they are "makers and remakers of signs and transformers of meaning" (p.175). These researchers reinforce the view that learners should not be regarded as passive recipients, or at best, agents of reproduction of received, sanctioned and authoritative representational forms, but rather an instrument that reduces the strength of the apparently stable and uniform neoliberal "regime".

A key question for critical educators is how can a neoliberal establishment be weakened? Freire (2000) calls for the oppressed to stand up for their rights and engage in dialogue with the oppressors when he notes that "human existence cannot be silent, nor can it be nourished by false words" (p.88). An established system like neoliberalism can be unbuttressed by actions that require that the immense role of agency in the meaning-making process be recognized, and through that recognition a more relevant, creative, innovative and perhaps emancipatory pedagogy, anchored in hope and dialogue, can be sought.

Education or literacy teaching should not be about skills and competence, it should be aimed at creating an active "designer" individual of meaning, with a sensibility open to differences, change and innovation. This resonates well with the multiliteracies perspective where meaning-making is an active, transformative process, and a pedagogy based on that recognition is more likely to open up viable life courses for a world of change and diversity. An individual who values goods only as long as they serve moral ends such as enhancing social status and reinforcing social obligations – can we imagine such a creature?

All the discussion presented in this thesis must be seen as having been written in the neoliberal context. By doing so we must be aware that there is a tension in the narrative. There is a tension here because we are social individuals too, stuck in the social, cultural, political context that shapes us. In Hungary I made meaning about my experiences of what I thought the purposes and roles of an educator was, but then what I felt free to do was constrained by the social and political circumstances in which I found myself. Neoliberalism presents it as though we can all choose what we want to do (in case of the multiliteracies, we each make sense of it also) BUT how we actually do justify it or make sense of it also gets shaped by the politics and social constructs in which we find ourselves.

Formidable roadblocks confront us along the (lifelong) learning journey. The issue of cursive writing may be one of them. Many even raise the question whether the issue is relevant. However, our critical inquiry must expose the *gap* between the inspiring rhetoric of the lifelong learning discourse and the bleak realities of "wasted human potential littering the global landscape" (Welton, 2005, p.210). Lifelong learning discourses permeate discussions across the world; adult learning, I am told, holds the key to the 21st century, or as Olssen & Peters (2005) put it, higher education "has become the new star ship in the knowledge economy" (p.313). In

1999, David Livingstone, a Canadian sociologist of work and education, claimed that the knowledge society was alive and well (Livingstone, 1999). He asserted that adults were engaged in unprecedented high levels of formal schooling, continuing education and non-formal learning, but maintained that the knowledge economy, in which growth is dependent on the quantity, quality, and accessibility of the information available, rather than on the means of production, was still illusory. Livingstone thought that there was a *gap* in talent use, in credential, in performance and in structure.

Welton (2005) claims that the capitalist neoliberal paradigm breeds deep skepticism about the developmental potential for most human beings forced to "labor for wages in our age of insecurity" (p.211) and causing an erosion in the wage-earners social competence to shape their own work and ultimately life. Braverman (1998) argues that the capitalist work design dissolved the unity between thought and action, conception and execution, hand and mind. As Welton (2005) points out, in the neoliberal narrative dependent wage earners are forced to surrender their social competence and the shaping of their own career. If Braverman and Welton are correct, then the compelling logic of the capitalist neoliberal organization challenges directly the achievement of the lifelong learner (or meaning-maker).

Because cursive writing is not seen as a great entrepreneurial competence that provides jobs for the neoliberal economy, it is regarded as an unnecessary skill to acquire. The simple answer to the intellectual enquiry of why cursive writing is not needed is quite simple – we don`t need it! No one knows exactly when and how the decision to drop cursive writing from curriculum happened. Based on provincial school board governance within the Canadian educational public-school system, we find that some schools in certain provinces still teach it and some schools do not. Even within schools, a parent to primary-school children learns that some

teachers teach it and some teachers do not. One can safely assume that neoliberalism did not manage to prevent this form of learning process from occurring, and also that some teachers do regard the learning of cursive writing as an important skill to acquire and have therefore used their individual freedom and their profession`s autonomous nature to introduce extracurricular activities such as cursive writing into their classrooms. Consequently, cursive is in danger of becoming an endangered species, a locally generated knowledge to which the state is not privy.

As an immigrant to Canada I was introduced to the local public school system as a parent of two children. At my curriculum evening in 2013, when I first learned that my primary-school children, in grades 2 and 3, would not learn cursive writing, I was told by the class teacher that if I wanted my children to learn it I should teach them at home, myself. This narrative by a primary-school teacher makes knowledge of cursive assume a personal responsibility of parents that does not interfere with the neoliberal agenda. Yet the decision about whether or not cursive writing will be taught has also become a personal decision matter for many teachers. For example, within the Halifax Regional School Board, we have public schools such as Le Marchant - St. Thomas Elementary in which cursive writing is taught, while this is not the case at Sir Charles Tupper Elementary, less than a kilometer away. Why is that? What factors are encouraging some educators to make the decision to teach cursive? And what factors may be influencing other educators to not teach it? How do educators decide which types of learning are valuable and which types are not? Based on my discussions with some of the teachers working in these schools, the decision-making is often based on the teacher *choosing* to teach cursive writing. As a grade 3 teacher from Le Marchant - St. Thomas Elementary noted, she choose to teach cursive, as do most teachers at my particular school teaching grade 3 (French and English). However, it isn't always carried through in the upper grade levels. Students are not evaluated on

cursive writing at any grade level. The teachers who do not teach it often feel it is not a necessary skill for the 21st century.

As a novice scholar I see the "we do not need cursive" narrative as an incentive to generate further inquiry and debate on the subject by taking up the challenge and analyzing the supporting and opposing arguments in order to enrich the lifelong learning discourses. This controversy emerges quite often in educational circles, and if one is a parent to children attending public elementary school in Nova Scotia, then the subject is communicated and emphasized every September at the first curriculum evening.

Current lifelong learning discourses are shaped by the neoliberal agenda that decontextualizes the learner (Gouthro, 2009). The market is presumed to work as an appropriate ethical guide for all human action (Harvey, 2005).The commodification of things such as sexuality, culture, history, and heritage; of nature as spectacle or as recreational therapy; of works of art, of religious events – these all amount to neoliberalization putting prices on things that were never actually produced as commodities. Indeed, it seems that capitalism cannot function without putting a price on everything. According to the Royal Bank of Canada, a medical student can receive up to $275,000 as a loan to assist in completing his/her studies (http://www.rbcroyalbank.com) while according to my loan consultant at Scotiabank, an educational student may borrow $10-15,000 a year in the first three years of a Bachelor of Education program. True, medical school is much more expensive and doctors are virtually guaranteed employment while teachers are not, but still – why is the doctor`s profession regarded so highly and the educator`s less so? One heals the human being, the other teaches it. Although it is not the purpose of this study to examine the discrepancies between professions, it is nevertheless interesting to note at least that the doctor`s profession appears to have more value in

terms of money than the teacher`s. Neoliberalization has transformed the positionality of labor by emphasizing that work is a commodity (Harvey, 2005), and sadly the work of teachers is not immune to this process. Parkison (2016) argues that as state legislatures and non-education agents become more and more involved in regulating the preparation of teachers, the long-term consequences of the policies these actors impose are of greater and greater concern. When policies are driven by a market-based, neoliberal ideology, Parkison points out that these policies are framed as the most economically effective and expedient means to ensure efficiency in the supply chain of teachers. Neoliberal ideology aims to transfer authority from the public to the private sector, under the conviction that doing so will produce a more efficient government and improve the economic and social health of the nation. Applied to educational contexts, Parkison (2016) maintains that teaching becomes:

> a process to be regarded through a vocational lens, and teachers are viewed as low-skilled, interchangeable components in the production of career- and college-ready high school graduates. Efficiency in the production of this type of teacher workforce becomes just another area for potential cost savings through minimum-competency job training programs. Because teachers are viewed as easily replaceable commodities, there is no interest in cultivating critical pedagogical skills during teacher preparation. The only skills that are valued are those deemed necessary to quickly produce high test scores from the teacher's future students (pp.107-108).

This minimum-competency approach eliminates any encouragement of a professionalized, stable teacher workforce. In my home country of Hungary, the Bachelor of Education degree has the least stringent entry requirements of any other courses available. This results in an interesting

and concerning scenario whereby students with the lowest high school grades are potentially becoming teachers for future generations. If teachers are seen as commodities in the neoliberal political economy then students also become commodities, and moreover their families too become consumers or clients within a service-based industry. Ayers & Ayers (2011) insist that there is great cause for concern about the characterization of students as products or commodities, which has led to calls for recognition of the student as an autonomous though discursively defined and situated agent within the educational system. As I discussed in the Waldorf education section (Chapter 3 and Section: Important Aspects of the Curriculum) it is important that we as educators aim at developing individuals with unique potential and dreams, and by teaching cursive writing, for instance, we provide our students with a rich, in-depth learning experience. Rich learning experiences allow participants to be motivated and achieve things through collaboration, not coercion. According to Darling-Hammond (2007), a 21st century school should provide the opportunity for students to build strong relationships, and rather than creating complex rule structures school norms should structure work around the "whole" rather than piecework, and should create information-rich environments for continuous learning. These characteristics could potentially define the work and culture of a school. They can be seen as pedagogical or as learning outcomes, but they are more clearly understood as cultural values. The culture bearers in schools who are best positioned to maintain these values over time are the teachers.

If we allow the neoliberal agenda to position students and their families as clients or consumers rather than as developing individuals with unique potential and dreams, we are lending a hand to the extension of the commercial logic of neoliberalism in which the schools and state do become the client and the teacher becomes the commodity. Giroux (2012) expresses

his concerns for the impact on curricula and pedagogy that results from the neoliberal agenda. He advocates for schools to nourish the power of imagination in children when he asserts:

> The task of deepening and expanding the imagination may be one of the most important pedagogical elements at work in any classroom. The ability to think beyond the self-evident and to be reflective about the grounds and framing mechanisms that shape one's identity and relationship to others is a crucial feature of a pedagogy of engaged and critical thinking (p. 62).

Giroux makes it clear in a very simple and concise way that education cannot be memorization and empty drills, it has to be thinking and reading. One wonders whether by reading a novel one can trouble the Establishment (P. Gouthro, personal communication, February 4, 2016).

Giroux`s statement aligns well with Waldorf education, in which Waldorf teachers believe that imaginative "wonderings" can be just as educational as objective facts and conclusions, if not more so. In the Waldorf method, imagination is the heart of learning and animates the entire arc of Waldorf teaching. When that concept is coupled with the school's other fundamental goal, that of giving youngsters a sense of ethics, the result is a pedagogy that stands out from today's system of education, with its growing emphasis on national performance standards in subjects such as mathematics, science, and reading, and its increasing rigor in standardized testing – to say nothing of the campaign to fill classrooms with computers.

Teachers, adult educators, and educational researchers must advocate for the need to work toward a richer and broader view of teaching – a view that acknowledges the necessity of relationships with students and communities; prioritizes equality, justice, and freedom over test scores; and investigates the pedagogical spaces within a democratic society that help both teachers and students gain a fuller understanding of their experiences and world.

The issue of cursive writing is just one slice of the narrative, but by pushing back (as the teacher from Le Marchant - St. Thomas Elementary school did by *choosing* to teach cursive) against the challenge of the neoliberal agenda represented by the narrow, test-score-driven current paradigm is critical for each student who lives and learns in a classroom, for the teachers struggling against unprecedented challenges, and for an informed democratic society.

Chapter 7 – *Conclusions and Implications*

We feel that we are constantly lacking sufficient education to make informed choices. And when we try to get knowledge from an authority, we question the sincerity of that opinion. We want an authority, but at the same time we question the status or the motives of the authority. No matter which authority we consult, we need to accept that he or she will be found lacking, inconsistent, and quite often in pursuit of his or her own interests when giving advice.

Choice is an essential human capacity. The fact that a person is able to make choices opens up the possibility for change. When I arrived in Halifax in 2013 I learned that I would not be able to work as a teacher because my credentials were not accepted by the provincial educational system. All of a sudden after 20 years of teaching experience I felt that I was not a teacher after all. After detailed consultation with immigration services I found out that in order to be able to teach in the public school system I needed a Bachelor of Arts degree in Educational studies (BA Ed). I then had to make a decision whether to go back to school and get my BA Ed degree or do something else with my professional life. I had a choice to make so I decided to embrace a career change and become an adult educator and a scholar in the field of lifelong learning. Looking back and reflecting on my experiences, I learned that making a choice is always a leap of faith where there are no guarantees. Salecl (2009) goes further when she asserts that the act of choosing can be traumatic precisely because there is no safety net to fall back on in case something goes wrong. It is a perplexing feeling for me, because even though three years have passed since I made that important decision regarding my life I am still not sure whether my choice was the right one in terms of my future professional career. Even though my decision was not market-driven I nevertheless feel that I am part of the neoliberal discourse, *that I am my own corporation*, simply because I am paying for my studies or I am investing in my education

and in my own future. I can certainly agree with Salecl`s claim that the act of choosing can be somewhat traumatic as my experience was very nerve-racking at that time. But at least I had choice and I hope that my decision will provide the opportunity to make a meaningful impact in the educational, social and political spheres of Halifax. If this happens, then I can pat myself on the back. Interestingly, I did not have much choice when I had to connect our household to the electrical grid or water provider as I was "forced" to make the choices I was presented with. In other words I had no option but to choose Halifax Water and Nova Scotia Power.

The problem today is that choice is very much perceived as rational choice and that our understanding of it as such is so linked to economic theory and consumerism and, in consequence, governed by such theory. In postindustrial capitalism we need to analyze the overwhelming insistence of the neoliberal narrative on choice as a particular way this type of society tries to perpetuate itself. I oftentimes experience complaints among my friends that there is too much choice in today's society. I recently attended a public neighborhood discussion group at the Halifax Central Library on the topic of LGBTQ matters, and the issue of choice came up. At this event one young participant expressed her opinion in saying that no one is "supposed" to be in charge in a democratic society and that someone (for example, corporations) is already "choosing" in advance what people supposedly need. An elderly lady asserted that people limit their choices by themselves or they act as if someone else had imposed limits for them. This dovetails with the story Salecl (2009) encounters where a professor decided to give students the chance before the exam to formulate the question they want to be asked in the exam. It turned out that this freedom of choice was not liberating in the slightest. As Salecl (2009) illustrates:

> At the time of the exam, students were deeply shocked when they were asked the very question they had formulated beforhand, and they behaved as if they had been asked something obscure and utterly unpredictable. One student even complained that the question did not connect sufficiently to the material they had been covering in the course (p. 176).

She concludes that although a person makes his or her own choice, he or she can easily act as if the choice has been imposed on him or her by someone else.

As adult educators in the field of lifelong learning it is crucial that we understand how choice is represented in our society. We ought to use our criticality when we scrutinize the neoliberal governance and offer resistance when we are faced with the false representation to people that there is actually no choice or only one choice: “We have to do it this way!” Choice played a significant part in Thatcherite reforms as well, as laid out in a speech by British Prime Minister Margaret Thatcher, on July 6, 1979 at the Conservative Political Centre Summer School (www.margaretthatcher.org). However, the Iron Lady, as she was nicknamed, had a slogan attributed to her: "There is no alternative" (TINA). It was a reference that she used to describe her belief that despite capitalism's problems, there is no alternative to it as an economic system, and that neoliberalism must be maintained. The phrase became something of a rallying cry of arguments in favor of free markets, free trade, and capitalist globalization, with Thatcher and her followers believing that it is the only way by which modern societies can advance themselves (Berlinski, 2008). The TINA phrase is analogous with choice being represented as being the only option to choose from.

As adult educators we have to challenge this underlying assumption and we have to point out that there are actually other choices we can make as a society. We should be thinking more

critically. Critical thinking fosters important skills that are important in allowing us to comprehend the world, to act within and upon the world (Hill, 2011) in ways that allow conditions for in-depth discourse. These dialogues should not be isolated discourses nor business-orientated sessions; they should address social reality with focus on common interest, and as Brookfield (2005) puts it they should "prevent the emergence of inherited privilege" (p.331).

People who are teaching educators, such as professors who are teaching pre-service educators, need to be thinking more critically, and as a society, parents and citizens involved in policies we should all be thinking more critically about these assumptions as to what should be included in terms of curriculum for children. We need to problematize this notion of choice, how it is being represented – do we have only one choice or do we have more than that? How do people make decisions around curriculum, for instance? Who makes the decision to omit cursive writing *per se*? These troubling questions must be raised in order to find an answer. Is it the teacher? The parents? The school board? Or is it the broader society that devalues writing? I intend to challenge this notion that people buy into the idea that things are good for them without questioning the underlying assumptions. We have to contest hegemony! Brookfield (2005) asserts that,

> Hegemony is the process by which we learn to embrace enthusiastically a system of beliefs and practices that end up harming us and working to support the interests of others who have power over us (p.93).

Brookfield`s critical pedagogy reminds us that the first task is to challenge ideology, and as Hill (2011) puts it "to set people free from the servitude of repressive ideas" (p.255). However, Brookfield`s ideology is:

> Hard to detect since they are embedded in language, social habits, and cultural forms that combine to shape the way we think about the world. They appear as common sense, as givens, rather than as beliefs that are deliberately skewed to support the interest of the powerful minority (p.41).

We have to contest this aspect of hegemony that affirms control over the people in the hands of the powerful and influential, otherwise people will "learn to accept as natural and in their own interest an unjust social order" (Brookfield, 2005, p.43). Brookfield aptly points out that hegemony is an idea that involves education and learning, and Gramsci is also a thinker who is closely associated with this idea when he asserts, "Every relationship of hegemony is necessarily an educational relationship" (as cited in Brookfield, 2005, p.43). Brookfield notes that the ideas and practices of hegemony are part of everyday life; hegemony is not experienced as if it is being forced upon us against our own will. He offers a daunting explanation when he points out:

> The dark irony, the cruelty of hegemony, is that adults take pride in learning and acting on the beliefs and assumptions that work to enslave them. In learning diligently to live by these assumptions, people become their own jailers (p.44).

People learn to accept and adopt certain beliefs that work against their best interests and serve those in power. Hegemony is powerful, therefore the concept of hegemony should also extend to our understanding of power. Foucault (1980) talks about the circularity of power when he asserts that power is not just one way, it moves in all different kinds of ways. He argues that,

> in contemporary society power works in many ways and that it should be understood as a circulation or flow around society rather than something statically imposed from above (as cited in Brookfield, 2005, p.45).

Foucault (1980) sees the adult as conspiring in his or her servitude thereby not needing the state

to reinforce it. He insists that,

> power *is* 'always already there', that one is never 'outside' it, that there are no 'margins' for those who break with the system to gambol in (p.141).

Part of what we do as adult educators is recognizing how the power plays in our lives and the ways it is used and abused. A critical theoretical understanding of adult learning should help us recognize the flow of power in our lives and communities and help us redirect our efforts to serve the interests of many rather than the few. That's why it is important that as critical theorists and adult educators we resist the idea of choice being presented as only one option. This aligns well with the Freireian (2000) culture with the desire to unmask and then confront power structures that stand against the working-class; it supports Brookfield`s (2005) strategy to develop an agency with the capacity to exert influence on the world through the exercise of individual and collective power. The dynamic from theory to practice is an essential and pivotal component in transformative learning in adult education perspectives (Mezirow, 1997). Jack Mezirow was an American sociologist and Professor Emeritus of Adult and Continuing Education at Teachers College, Columbia University, whose transformative learning theory incorporates psychological (changes in understanding of the self), convictional (revision of belief systems), and behavioral (changes in lifestyle) perspectives. An important part of transformative learning is for individuals to change their frames of reference by critically reflecting on their assumptions and beliefs and consciously making and implementing plans that bring about new ways of defining their worlds. This process is fundamentally rational and analytical and involves both the educator and the learner. The educator fosters autonomous thinking, promotes discovery in learning and establishes an environment that builds trust and care and facilitates the development of sensitive relationships among learners (Cranton & King, 2003). The central

focus to Mezirow`s (1997, 1998) self-directed transformative learning theory is understanding how reframing a meaning perspective can bring with it an increased sense of power. As Mezirow (1997) opines:

> A defining condition of being human is that we have to understand the meaning of our experiences. For some, any uncritically assimilated explanation by an authority figure will suffice. But in contemporary societies we must learn to make our own interpretations rather than act on the purposes, beliefs, judgments, and feelings of others. Facilitating such understanding is the cardinal goal of adult education (p.5).

Here as Brookfield (2005) points out, power is regarded as the ability to understand the world in a way that "feels authentically grounded in critical reflection" (p.49).

Brookfield (2005) argues that we have to recognize and unmask power relations and inequities embedded in ideology and inherent in our daily lives. We have to investigate and decide when power is exercised responsibly and we have to learn to defend against its unjust and arbitrary use. Critical adult education theorists argue that the purpose of theory is to help us realize the ways dominant ideology limits the opportunities in life. Raising awareness of how this happens then provides "the necessary theoretical opening for understanding how an educative process might enable people to give up their illusion" (Welton, 1995, p.13). Using critical theories may also help us to challenge our taken-for-granted assumptions that often inform education decision-making processes.

Being critical is effective to the extent that it keeps alive the hope that the world can be changed to make it fairer and more compassionate (Freire & Freire, 1994). Paulo Freire, the great Brazilian educator, emphasizes the importance of hope in our educational work; he asserts that

we have to unveil opportunities for hope for our learners no matter what the obstacles may be. By reading the book one learns that just to hope is not enough, it has to be more than that. Hope requires education, it "needs to be" ontological; in other words, the struggle to improve the world should be performed with hope anchored in practice, which in my understanding also means that we have to put theory into practice.

Canadian First Nations educator Marie Battiste (2013) describes education as a process by which a society expresses its reality and values, processes its culture and transmits it to each generation. The modern curriculum is the tool by which the state approves and standardizes what counts as knowledge and the elite in power choose what content and methods will be sanctioned, thus schools, as Apple (1979) identifies, can be used for hegemonic purposes. Battiste (2013) accentuates the importance of dialogue between educators and policy makers in order to avoid the establishment of a mainstream curriculum that ignores other ways of learning. Battiste also challenges us with powerful questions: "Who are the people who make these decisions, how will their choices be made, and what governs those choices? What is the role of a critical education about the hierarchy of power embedded in society?" Certainly Battiste`s particular concern is education among Aboriginal people, but her questions are relevant to all educators all over the world. By taking up Battiste's question, I am focusing particularly on the issue of cursive writing and how decisions are made about educational choices within society.

But again, Shakespeare`s metaphor "O brave new world …", a notion I brought up in my Introduction chapter (p.1), encourages the question: Is technological evolution always a completely good thing? Should technology facilitate a brave new classroom – one where the needs for the changing aspirations of future generations of students who are aching for more autonomy, agency, collaborative learning and distributed creativity are met (Blake & Ebooks

Corporation, 2013). And does this mean that in order to gain "progress" we must give up the important learning that may be associated with cursive writing?

As I indicated in my scientific research chapter, learning to write by hand clearly stimulates brain activity and engages cognition, and it is also a motor process. In lifelong learning, many scholars have pointed to the importance of experiential learning (Fenwick, 2014). Learning through experience suggests that innovative processes involve multiple strategies and demand conditions of freedom, patience, support, and recognition. When the hand forms letters, the movements of the wrists and fingers improve the fine-motor movement of the hand, and hand-eye coordination (Berninger et al., 2006).

My interest in critiquing the decision to omit the teaching of cursive writing involves critically questioning the overemphasis of IT and media skills being taught in elementary schools at the expense of handwriting competence. Challenging what may be invalid assumptions, (e.g., children do not need to learn cursive) and the behaviors based on them (e.g., promoting e-learning in ever lower grades) connects to Mezirow`s (1997) transformative theory, in that I would argue that educators need to question the assumption that learning about technology is more important than learning cursive writing. Mezirow's theory of transformative learning is fundamentally concerned with construing meaning from experience as a guide to action.

It is important that educators, within the Habermasian (1987) lifeworld context, can engage in dialogue about teaching practices and critically consider and challenge the consequences of this decision to eradicate the instruction of handwriting.

Habermas argues that when decisions are made in the lifeworld – the place where every day experiences of homes, communities, schools and churches are lived (Gouthro, 2009) – they are determined by dialogue as opposed to handed-down policies, so that free discussions can

occur about the purpose of learning, how learning happens, how we can best prepare children to engage in lifelong learning and what our role is as critical educators in seeing that they are well prepared.

If we conclude that it is sufficiently important that children continue to learn handwriting in schools, will it be necessary to choose between the two formats, manuscript (ball-and-stick) versus cursive with connecting strokes? Are two years of handwriting instruction in the beginning grades sufficient? Primary-grade children might learn cursive letter writing, as is still the practice in Europe, or they might learn to print letters, as is the instructional practice in the United States and Canada. While no clear experimental evidence supports one being better than the other, children encounter manuscript fonts more often than cursive fonts in reading hardcopy books or written texts on their computer monitors or e-book readers. Berninger (2013) asserts that,

> …cursive, introduced in the 19th century before typewriters were invented in order to speed up handwriting, links all the letters within a word with connecting strokes and facilitates attention to all letters in a word, thus improving spelling and the speed of writing and reading. Teaching both of these handwriting formats has advantages including learning to recognize and write letters despite small variations in letter forms sharing the same name. Consider all the fonts computer users can choose from for word processing. Apple's Steve Jobs was an accomplished calligrapher before he became a pioneer in technology tools to support writing – and that is one of the reasons we have so many font styles to choose from in computer writing! Yet, with appropriate and sufficient experience in writing and reading varied fonts, writers still recognize a letter whether

> produced by a word processing program or in handwriting with a ball and stick format or a cursive format with connecting strokes. Using a keyboard also requires cross-case abstraction. All letters on a standard keyboard are in capital case, but writers produce text with mostly lower-case letters (p. 2).

Schwellnus, Cameron, & Carnahan (2012) point out that in order to determine whether one or both formats should be learned, a study is needed to compare manuscript and cursive writing in children with and without handwriting challenges. This kind of study would provide information necessary to understand the contribution of all the variables involved. An international study could be done comparing the writing in different countries where either manuscript or cursive writing styles are taught in the early grades. They conclude that irrespective of what format educators choose, a more structured instruction time and increased practice is needed to suit the age of the children. Medwell & Wray (2007) suggest that it is time to re-evaluate the importance of handwriting in the teaching of literacy. Handing out iPads to children in grades 1 to 3 may not be such a good idea after all, but for now screen time is filling up the day. Indeed, emerging research suggests that there may be reason for concern, and the American Association of Pediatrics has been warning parents for years to limit screen time for their children. It will take years before the science is conclusive and this could have a profound effect on the educational system as far as handwriting is concerned. Until then, the paperless, new-generation classroom will use software that can correct students as they make mistakes, and work can be automatically tailored to the abilities of each student (Scherer, 2014). Scherer also points out that US President Barrack Obama has announced a federal effort to get a laptop, tablet or smartphone into the hands of every student in the country, and provide enough bandwidth to allow simultaneous online access to all 49.8 million American children by 2017. If President

Obama keeps his promise, 2017 will be the year when textbooks are replaced by flat screen video displays. The paperless learning environment will represent the next revolution of technology transforming the classroom.

I do not see President Obama`s promise materializing by 2017. Scherer (2014) notes that the biggest challenge facing education in the United States is poverty, which occurs across cultural, language, and racial groups. Depending on geographic region, 20-25% of the school-age population lives in poverty. Many children do not have homes to go to when school is over, or reliable access to food in the evening or summer. Berninger (2013) suggests that meeting the basic needs of a safe place to live and adequate nutrition are necessary to meet the Common Core standards in writing and across the curriculum. Berninger also notes that research is finding benefits in bilingualism, but these may depend on parental level of education and/or working memory disabilities. The issue therefore of whether it is realistic or beneficial to assume that the best way to address inequality is through access to technology must be scrutinized especially when it is not clear that that`s the best way to direct the majority of our teaching resources. This is not to say that students should not be given access to technology, but it is not clear whether it is the most helpful strategy to help children learn. Facebook CEO Mark Zuckerberg's analysis that technology is a game-changer in education (Grossman, 2014) is fair, but whether it will increase equity for children it remains to be seen. Educators know that even when the technology is the same the outcomes diverge, therefore they should have some say in what`s happening in the classroom, and the opportunity to explore research that raises alternative perspectives should be provided. Otherwise the digital toll may only benefit the haves more than the have-nots.

In the early years of cell phones, I remember people having them in their pockets, but now the devices seem to be constantly held in the hand, like an extension of the human arm and

the persons themselves. I am concerned that in a similar way we may no longer nurture and treasure our handwriting; we have exchanged it for something more mechanical and less human, more electronic and less about ourselves. The world has decided to go virtual instead of spiritual.

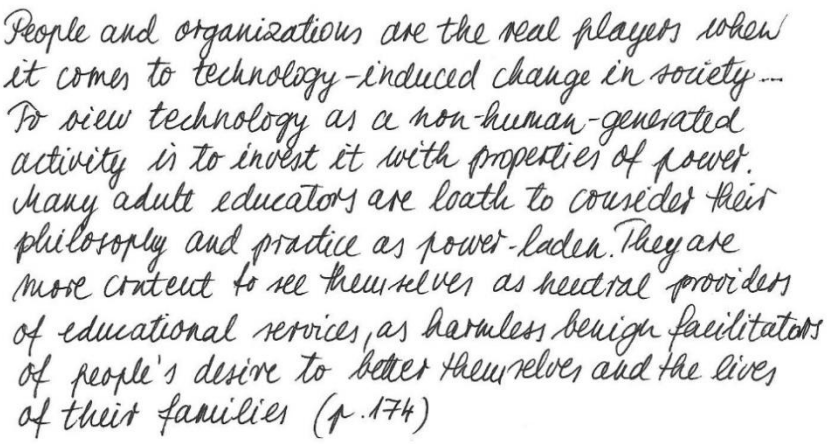
We may end up paying a huge price for the comfort and convenience offered by the keyboard. Google had to rethink its CAPTCHA (Completely Automated Public Turing Test to Tell Computers and Humans Apart) program, also known as a human interaction proof, because people were not able to read and understand the cursive symbols any better than a computer could, if not less able, so Google uses symbols now. We may have to pay someone to read cursive for us. The joy of getting a fountain pen or a BIC, invented by a Hungarian, will be experienced only by handwriting hobbyists during upcoming pen shows (http://fpgeeks.com). Learning is a process; it involves change in knowledge, and is something students themselves do (Ambrose & Ebooks Corporation, 2010). These experiences also occur when the process of learning to write takes place. Surely, what is happening now could be called unlearning to write by hand.

I argue that the eventual loss of cursive writing is an actual loss to human society and civilization, and one does not even have to be overly sentimental about it. The facts are, it took primates millions of years to evolve both the anatomy (for instance, opposable thumbs) to be physically capable of making marks on bones and cave walls, and the neurological capacity (big brains) to reason that those marks could represent abstract ideas, not just the objects themselves (Bronowski, 1974). It took further tens of thousands of years to refine those abilities to the art form represented by the most elegant forms of cursive script (Spencerian, for example), and evolve the human sensibilities able to experience the joy of getting a fountain pen or a BIC, as a gift. Today, fewer than a couple of centuries later, humans are once again back to single-fingered

pecking at stylized pictograms on computer touch-screens in the expectation that this can somehow allow the same degree of self-expression as the grammatical constructs of real words. The unlearning to write or the "de-evolution" of writing will be a potential loss in learning opportunities and creativity and before we know it the next great leaps in communication and information processing – such as voice-recognition technology and even direct neural linkage – may result in human speech and reasoning going the way of writing.

How adult learners see things – and through what lens – is crucial to understand. They must analyze the subject, the situation, the people involved, and – most importantly – themselves; if they believe everything they see or hear, they will soon be unable to distinguish what is true and not true in their eyes. This, the ability to exercise critical thinking applies to the general process of lifelong learning as well.

My interest in critiquing the decision to omit the teaching of cursive writing involves critically questioning the overemphasis of IT and media skills being taught in elementary schools at the expense of handwriting competence – which I hope will shape future discussion in lifelong learning discourse. Educators need to question unfounded theories and the practices based on them. Murphy (2000) tackles this issue head-on when he asks: what is meant by technology? His answer and assessment regarding the impact of the power of technology on its environment and on adult educators is significant and noteworthy. First, he claims that the change induced by the power of technology on the environment depends on the people using it. Second, he challenges adult educators when he points out:



Murphy provides further grounds for argument when he asserts that we conveniently consider technology-based transformations in society as power-free manifestations of evolutionary change, in which people consistently try to improve their lives and try to avoid "back-breaking" and "mind-numbing" boring work. In this context I agree with Murphy that lifelong learning needs a close examination and scrutiny with regards to conceptualizing social change and transformation. Many educators are advocates of learning based on the changes in technology but we cannot allow technology to be the sole provider of adequate rationale for lifelong learning discourse and social change. Therefore I argue that we have to trouble the *status quo*, which is easy to say but difficult to carry out. However, this statement makes me ask myself the question: "What can I do as an individual based on what I learned?" My true calling is still to be uncovered but I will continue posing this question to myself until I develop a strong, personal critical theory perspective that can intensify my interest in and commitment to my vocation and future career. My aim is to move forward in my studies and keep focusing on the epistemological criteria of adult education and at the same time invite critical scrutiny in order to challenge my assumptions and intellect. To quote Gramsci, each person is a theorist because he or she "participates in a particular conception of the world, has a conscious line of moral conduct, and therefore contributes to sustain a conception of the world or to modify it, that is to bring into

being new modes of thought"(Gramsci, Hoare, & Nowell-Smith, 1971, p.9). I believe when we start thinking this way, Mezirow`s (1997, p.5) quotation in which he states that "the defining condition of being human is the ability to understand the meaning of our experiences" can do its work.

With the aim of setting up context for future discourse, I conclude my research with the suggestion that instead of asking whether we should teach cursive versus technology, we should ask how we can incorporate technology into our instruction to help students develop a sound academic foundation that is effective and relevant while keeping cursive writing. By performing this discourse *we are thinking critically* and *we are problematizing the notion of choice.* Being multilingual by hand – an expression first coined by Dr. Virginia Berninger (Berninger, 2013), that is having the ability to both type and write in cursive and manuscript – could prove to be an efficient way forward if, in my opinion, we combine it with keyboard typing skills as well. It is interesting to note Marx`s remark that the history of civilization is entirely down to human beings possessing opposable thumbs (Patterson, 2009). It is intriguing (and impressive) that humans would eventually invent a way of writing that required only the movement of the thumbs – texting with the cell phone. I want to reassure my Twitter- and Instagram-using friends and critics that I am not saying we should not have these social media platforms. What I am saying, however, is that in order to write in a more in-depth, scholarly way, the synthesis has to be sophisticated in terms of what they are bringing in. Of course, one might argue that one does not become a good writer just by reading and studying languages or English literature. But it`s an important component, I think; if one does not actually learn how to read, and read carefully, extensively, it is going to be very difficult to write in any depth or sufficiency. The process of writing is a slower process than texting for instance, so part of the writing forces you to slow

down, make the connections, make sense of it, and makes you think about how writing works. Also, it challenges you, as you are writing down the words, to think about what they really sound like. It forces a "change" to look at writing as a form of craft, because when you are learning to do good penmanship you are treating writing as part of art; consequently, you are thinking about how you articulate and express words.

One can ask the question, how often do we consider craft when using technology? Sometimes we do, hence my multiliteracies analysis in Chapter 3. If we are going to replace cursive writing with social media blogs or whatever comes to us in the future then we are going to lose a tremendous amount. It would undermine our overall literacy, since the tendency of technology is to allow us to do things in a superficial way while it really takes time to learn to read in-depth. If we look at the history of handwriting and what it has taught us, and if we look at where we are going in the future with technology, I argue that we should not displace it completely.

I agree with Fisher (2001) when he asserts that "writing changes as humanity changes" (p.8). Computers can now write both messages and programs among themselves, and electronic communication has rapidly intruded into the domain of speech-based writing. Even the material with which writing takes place on plastic screens is called rather poignantly e-ink (electronic ink) implying that one day the paper parchment will forever be replaced. I do not think we should get rid of cursive writing in order to move forward. I propose we look at handwriting as an agent that is improving our lifelong learning discourse. If we want people to have a deeper sense of literacy then we need to be looking at such issues, and as educators we have a role to play in the decision-making process regarding cursive writing in the school curriculum. As Fisher (2001) presents it:

> I believe that whatever form writing may take in future, it will remain central to the human experience, empowering and memorializing (p.319).

The skills of writing (and reading) will continue to provide access to knowledge. As we venture forward into the 21st century, I expect writing to be so much more than Voltaire`s "painting of the voice". I am confident it will serve and advance humankind in a multitude of wondrous ways, and I hope writing will not cease to enrich our lives.

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