Animating Curriculum: An Exploration of Integrated Curriculum

by

Barbara Victoria Holly Ann Sammut

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Department of Curriculum, Teaching and Learning
Ontario Institute for Studies in Education
University of Toronto

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Abstract

The expectation to teach content and skills within a structured educative setting creates a climate of tremendous challenge and opportunity for educators on a daily basis. Educators will seek out ways to integrate curriculum as a way of being efficient. Curriculum integration, while a commonly used educational term, remains a challenging concept to define and examine both in research and in classroom practice. Curriculum integration is a microscopic lens whereby the educator approaches their practice. Curriculum integration can be an effective method of delivering curriculum. However, daily instruction that contains instructional methods that are embedded within multiple learning styles and modalities are paramount. More importantly, than the how a curriculum is integrated appears to be an educator’s methods of instruction, management and organization. My thesis develops what I have called “A Blended Curricula Deliverance Program” that helps deliver instruction in a holistic manner.
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# Table of Contents

Thesis Acknowledgments ........................................................................................................ iii

Table of Contents .................................................................................................................... iv

Chapter One: Introduction to Integrated Curriculum ............................................................... 1

Chapter Two: Relevancy of Literature Review ....................................................................... 15
  Research Embracing Curriculum Integration .................................................................... 17
  Models of Curriculum Integration ..................................................................................... 29
  How the Three Integrated Models Blend Together ........................................................... 41
  Implications for Implementing Integrated Curriculum ...................................................... 42
  Conclusions ......................................................................................................................... 53

Chapter Three: Defining A Blended Curricula Deliverance Program .................................. 55
  Conceptualizing each principle of A Blended Curricula Deliverance Program ................. 58
    A: Awareness .................................................................................................................... 58
    B: Blended ....................................................................................................................... 68
    C= Curricula ................................................................................................................... 70
      Theme-Based Model of Integrated Curriculum ............................................................ 71
      Interdisciplinary Model of Curriculum Integration ....................................................... 72
      Problem-Based Model of Integrated Curriculum ......................................................... 73
      Implications of the Models of Curriculum Integration ............................................... 75
    D= Deliverance ............................................................................................................... 76

Application of A Blended Curricula Deliverance Program .................................................. 77
  Solution Fluency: Stage One: Define ............................................................................... 80
  Solution Fluency: Stage Two: Discover ............................................................................ 80
  Solution Fluency: Stage Three: Dream .............................................................................. 81
  Solution Fluency: Stage Four: Design .............................................................................. 82
  Solution Fluency: Stage Five: Deliver .............................................................................. 82
  Solution Fluency: Stage Six: Debrief ............................................................................... 83
Implications for A Blended Curricula Deliverance Program and Solution Fluency .....85
Conclusions of A Blended Curricula Deliverance Program ...........................................86
Chapter Four: Imperative Integrated Curriculum ..........................................................88
Conclusions ...................................................................................................................100
Formularized Perspective .............................................................................................102
Bibliography ..................................................................................................................107
Chapter One: Introduction to Integrated Curriculum

Being an educator within the twenty-first century is an extraordinary opportunity. On a daily basis, educators deal with an infinite number of variables at any given moment. As a byproduct of this (experiential) reality, the interconnected nature of teaching parallel ‘engrams’ and dendritic pathways of the human brain. This assertion recognizes that at any given moment the parasympathetic and sympathetic responses are working symbiotically to govern physiological and cognitive responses simultaneously. This harmonious exchange is catered to when pupils are provided with intentionally planned experiential learning opportunities. This is the essence and basis of A Blended Curricula Deliverance Program (ABCDP). The purpose of this thesis is to provide educators with methods and strategies for curriculum integration by applying the principles of ABDCP within educative settings.

Currently educators in Ontario are expected to address hundreds of curricular expectations per grade level. In addition, educators have the Ontario College of Teachers issuing ‘qualifiers’ as to what constitutes “best practice” within an educative environment. A sub-section of expectations, reside within an acknowledgement that each school board and individual school has a particular set of educational variables that need to be addressed on a daily basis. Given these factors it is not surprising that some educators may experience trepidation and cognitive dissonance because trying to navigate within this educative landscape of “Guiding Principles” can be overwhelming. A consideration regarding ‘how to’ deliver curriculum expectations is of utmost importance. “Research has consistently shown that students in integrated programs demonstrate academic performance equal to, or better than, students in discipline based
programs. In addition, students are more engaged in school, and less prone to attendance and behavior problems” (Drake & Reid, 2010). This aforementioned quote is conducive as it clearly expresses a need for integrated curriculum. The ways in which an educator could actualize and implement this concept is incalculable. An educative term that was developed for this thesis, strives to provide educators with a method for curriculum integration in a strategic and meaningful way. The term is: ABCDP, which stands for A Blended Curricula Deliverance Program.

The structure of this thesis is as follows: This introductory chapter provides the framework for the thesis and provides the reasons for the selection of the research topic. Chapter two aims to inform readers about research pertaining to curriculum integration. I begin by examining the theoretical understandings of curriculum integration including definitions of curriculum integration. I then examine selected research related to curriculum integration and endow a few models of curriculum integration. The need to explore and examine current forms of integrative models of curricula was of significance within Professor Loepp’s paper entitled: Models of Integration. For this reason, an examination of Professor Loepp’s research pertaining to three models of curriculum integration: the interdisciplinary model, a problem-based model and a thematic model are conducted. Benefits and challenges associated with each model are illustrated. By reducing the integrated models to a common level, five implications surface: a reframing of how educators parley curriculum, exposure and experience pertaining to constructivist-oriented pedagogy, learning communities, pedagogical documentation and systemic reform. As the relevancy for literature pertaining to curriculum integration was reviewed,
the need for a method for educators to weave into their own praxis is showcased within chapter three.

Chapter three proposes a method for educators to approach curriculum integration with the application of the term: ABCDP. This term stands for A Blended Curricula Deliverance Program. Throughout this chapter each aspect of the educative term (ABCDP) is explored by a case study example that infuses with the research from Ian Jukes relating to a twenty-first digital citizen has developed solution fluency (Crockett & Juke, 2010). Solution fluency is a step-by-step process that assists an educator in the process of placing problem solving within a real world context.

Chapter four is the whereby the importance of curriculum integration is reiterated. A summative aspect provides conclusions of ‘why’ and ‘how’ the principles of A Blended Curricula Deliverance Program can assist twenty-first century educators in dealing with the multitude of challenges present within educative settings.

"The very notion of 'integration' incorporates the idea of unity between forms of knowledge and the respective disciplines" (Pring, 1973, p. 135). Execution of this concept is limitless. Inherently this aforementioned vastness of educational praxis (choice) for the deliverance of curriculum represents the magnitude of teaching. In addition, it is necessary for educators to evaluate these definitions, of curriculum integration, within the sphere of context and content specificity. Therefore by examining curriculum integration with a mathematics teacher the context of integration could imply a blending of various mathematical concepts versus integration among multiple subject areas that can showcase the interconnected nature of mathematics within all subject
domains. Simply put depth versus breadth. Going “deeper” within one particular curriculum expectation versus connecting that expectations to others subject areas.

Curriculum integration was selected as a topic due to the nature of educative settings within Ontario. In order for any form of integration of curriculum, the educator is required to be acutely aware of all aspects of the subject matter in which the expectations had been derived. This is important because of the pre-planning involved in curriculum integration. What is of importance is simply not the educator’s knowledge base but rather the ability to provide learning opportunities for the pupil to discover, qualify and review those expectations personally and as a whole group.

While planning for curriculum integration can be both challenging and rewarding. By clustering expectations to meet expressed pupil needs entails creativity, confidence and open-minded “big-picture” thinking. As well, curriculum integration creates increased opportunities to give students practice in meeting a range of curriculum expectations, throughout the program.

Integration of curricula units vary depending upon the context and the educative setting in which the implementation occurs. Within the initial levels of school (K-8) integration occurs more frequently than within the high school and college levels (Loepp, F., 2004). At the primary level integration of curriculum is often centered upon a particular theme or topic.

“Within each of these topic lessons, the curriculum outcomes have been mapped, and each week has both a ‘fertile question’ to guide the learning progress and establish a problem for students to solve, and an assessment task related to a specific ‘focus’ that
allows students to demonstrate that they have solved such a problem. Thus, one week, a
student might cover outcomes from all of the possible subjects, but the assessment task
might relate specifically to Geography. This allows teachers to keep up to date with
students' progress in each of the curriculum areas.” (Gatewood, T, 1998).

Present within the educative spectrum, the high school and college level integrated
curriculum units are more likely to be based upon problems (Loepp, 2004).

Evidently the application of curriculum integration as a method for educators to
animate curriculum is a necessity. Therefore, the relevancy of the literature within.chapter two continues to provide a foundation of the research supporting curriculum
integration.

The literature reviewed within chapter two provides educators with a glimpse of
reasons to decide to implement models of curriculum integration into one’s daily praxis.
35) "The single best way to grow a better brain is through challenging problem solving.
This creates new dendritic connections that allow us to make even more connections".
As an educator, defining what constitutes ‘challenging problem solving’ is a foundational
question. Any attempt to qualify this concept, should be based upon negotiable
dialoguing between pupils and educator. The notion of reciprocal dialogue will be
explored via two educational terms: triangulation (student voice) and pedagogical
documentation (educator voice).

In Jacob’s (1989) definition: interdisciplinary model means conscientiously
applying methodology and language from more than one discipline to a theme, topic, or problem. Integrated curriculum units are diversified because the deliverance of these units dependent upon three variables: context, educator’s personal pedagogical disposition and educational institution whereby the integrated curriculum occurs. It is beneficial to explore each variable in further detail. First, defining the context in which curriculum integration is being applied is essential. Within any specific curricular subject there is opportunity to integrate multiple expectations from that one subject domain versus integration among other subject disciplines. Second, the “educator’s personal pedagogical disposition” meaning their willingness to engage in this challenging and exhilarating endeavor, is of importance. The decision to deliver curriculum, in an integrated manner, is a personal choice as the Ministries of Ontario have yet to mandate a constructivist-oriented approach as the preferred form of instruction. Thirdly, the educational institution by which integrated curriculum is being utilized. The need to explore and examine current forms of integrative models of curricula was of significance within Professor Loepp’s paper entitled: Models of Integration. For this reason, an examination of Professor Loepp research pertaining to three models of curriculum integration: the interdisciplinary model, a problem-based model and a thematic model.

According to Loepp (2004) one model of curriculum integration is identified as ‘the interdisciplinary model.’ In this case, ‘Schools group traditional subjects into blocks of time, assign a given number of students to a team of teachers, and expect the teachers to deliver an interdisciplinary or integrated curriculum’ (Loepp, 2004). For example: in the seventh grade Language Arts, Science and Social Studies and educators may get together to create an interdisciplinary unit on Lake Ontario. Lake Ontario is the
foundational basis for the unit as an underlying idea in which all other components of the unit emerges from. Each educator would examine the concept “Lake Ontario” and apply a scope of subject-specificity while creating tasks for the student populace. The English educator could link Language Arts to exploring vocabulary words and terminology and using technology to create mixed-media posters promoting preservation of Lake Ontario. The Science educator may focus upon exploring the various life ecosystems at reside within Lake Ontario, while the Social Studies educator may encourage the pupils to research the history of the Lake Ontario. This historical overview may include recognition of how local people rely upon the lake for transport, recreation and food. Providing an interconnected webbing of Lake Ontario in association with the other Great Canadian Lakes is another possibility. This example of a potential interdisciplinary unit or lessons would be classified as a multidisciplinary or parallel design, which is defined as units or lessons developed across many disciplines with a common organizing topic (Jackson, A.W. & Davis, G.A., 2000).

An advantage of this model stems from the emphasis for educators to collaborate with one another. This collaborative experience is of importance for three reasons. First, it allows for educators to try and manage within the multitude of curriculum learning outcomes. Secondly, collaboration and ‘team teaching’ allows for the students to observe with their own senses educators, within the educative setting, share the responsibility of delivering curricula first hand. One disadvantage to the interdisciplinary type of model is an educator can become complacent by repeating the same integrated unit year after year. Just because an integrative unit has been delivered annually does not mean the content is still relevant or meaningful to the current student populace. Second, integrated teaching
can disregard the relevancy for a cultivation of subject-specific knowledge sets that are fundamental to become experts in varied industries (Gatewood, 1998).

A second model described by Loepp (2004) is the ‘problem-based model’. This model is based upon the founding principle that a ‘local problem’ is at the center of the planning and various disciplines focus collectively in solving this particular problem. According to Chard (1998), planning problem-based model involved three steps: First, educator and student populace select a topic of study based on student interests, curriculum standards, and local resources. Second, the educator finds out what the students already know and helps them generate questions to explore. The educator also provides resources for students and opportunities to work in the field. Third, students share their work with others in a culminating activity. Students display the results of their exploration and review and evaluate the project (Chard, 1998).

A benefit of a problem-based model resides in the potential to focus curricula efforts towards selecting a highly relevant problem. The opportunity for educator and pupil to methodically create, examine and approach a problem that is meaningful to a particular educative setting is useful. Research tells us that students become involved in learning when tasks enable them to answer their own questions and explore their own interests (Duke, 2004; Duke et al., 2006; Howes, Lim & Campos, 2007; Ontario Ministry of Education, 2004). Teachers report that students “come alive when they realize they (are) writing to real people for real reasons or reading real-life texts for their own persons” (Duke et al, 2006).

A limitation of this integrated model lies in the fact that creating a problem that
encapsulates all curricular expectations in a multifaceted level is challenging.

The third model of integrated curriculum is known as the ‘theme-based model’. Within this model, curricular subjects are taught in varied blocks but the linking resides in a theme or themes interwoven across the whole curriculum. Often three or more subject areas are involved in the study, and the unit ends with an integrated culminating activity. The advantage for this particular model is that it allows teachers to take a broad concept and make connections to it within the relevant learning blocks. Although making cross-curricular connections is of use, an issue arises due to the necessity of ensuring that themes and thematic units are founded in standards required within the educative expectations. A limitation of a ‘theme-based model’ is a superficial selection of a theme that emerges simply from the pupil interests that loosely connect to the curriculum expectations.

Based upon the examination of the three integrated models: interdisciplinary, problem-based and theme-based model, there are a multitude of connecting similarities between them. A commonality resides in the educational approach towards delivering curriculum to be based in constructivism. Both educator and pupil work in unison as the application of curricula assists in further enhancement of the learning process. The essential difference each approach resides in the perception of the educator who applies a model. The perception relates to the perceived degree of separation that exists between subject areas. The perception ‘of difference’ is of importance because the context (educative setting) and educator praxis correlates with the implementation of each model. Since these models are simply methods of ‘how’ one can deliver curriculum, it is advantageous for educators to integrate the models as part of their schemata on how to
disseminate curriculum. This recognition coincides with the notion that each educative situation varies because each student populace requires new ways of experiencing the curriculum based upon their own unique quality.

As the integrated models are reduced to a common level, there are five implications that transpire: a reframing of how educators parley curriculum, exposure and experience pertaining to constructivist-oriented pedagogy, learning communities, pedagogical documentation and systemic reform.

The research emerging from cognitive science and educational studies suggest that some form of curricular integration can promote learning. It is useful to recognize that there are other ways of measuring students' improvement than simply their test scores, and a number of studies have focused on those. Kain (1993) discovered that, in schools where there has been an integrated curriculum established, there is 'greater intellectual curiosity, improved attitude towards schooling, enhanced problem-solving skills, and higher achievement in college.' Furthermore, Kain (1993) also found that many students felt that integrated curricula were more relevant to the real world, due to real world problems being of an interdisciplinary nature, and this increased both their learning and motivation. Similarly, when constructivist experiences are used, students are able to construct knowledge based on their own backgrounds and learn to value inquiry (Lake, 2000). The focus within chapter three is redefining principles of an integrated unit as A Blended Curricula Deliverance Program (ABCDP).

Upon examination of the implications within the literature review it is necessary to conceptualize the principles that concoct A Blended Curricula Deliverance Program (ABCDP). The intention is for this educative term to be applicable to educative settings
by providing a theoretical framework, for an educator, to incorporate into their daily praxis.

A Blended Curricula Deliverance Program will be explained by expanding upon each letter of the term: A represents Awareness (an educator is aware of one’s breathing cycle in relation to being a contemplative practitioner. This awareness can result in an ability to recognize the multitude modalities of intelligences in relation to cognitive science). B emblematizes Blended (how an educator can set up the educative setting, the space whereby pupils frequently reside, for instruction to facilitate the development of learning styles with space for varied group formations). C signifies Curricula (explores how an educator can aim to integrate curriculum through the application of three models of integration: theme-based model, interdisciplinary model and problem-based model. The application of the models can be implemented according to the level of teacher direction, depth of curriculum blending and integration and student responsibility. Integrating curriculum through the application of model for curriculum integration typifies a need for holistic education. D means Deliverance (the approach of how an educator can decipher ways to deliver curricula in a manner that is holistic in nature by infusing the concepts acquired within each aspect of A Blended Curricula Deliverance Program).

From defining the meaning of A Blended Curricula Deliverance Program, the suggestion is for educators to aim to incorporate active student lead problem solving activities on daily basis. Defining ‘active student lead problem solving activities’ means allowing the student to cater to their cognitive neuronal connections through ‘experience’ with the curricula. The way an educator can provide experience for the curricula is to
intentionally place problem solving in a ‘real world context’. By placing the problem solving in a real world context, the intention is to capture the pupil’s interest by focusing upon something identifiable or meaningful within their existing experiences and subsequently cognitive schemata. There is a need to provide pupils with an internal model of problem solving that will equip them with a methodology to solve problems outside the educative setting. The work by Ian Jukes relating to a twenty-first digital citizen has developed solution fluency (Juke, 2010). Solution fluency is a step-by-step process that assists an educator in the process of placing problem solving within a real world context. The intention is to expose the pupil’s to multiple opportunities for problem solving so that the stages are an engrained strategy of how to problem solve. The goal is to have the pupil be able to generalize and apply problem-solving skills learned within the educative setting to every facet of their lives.

Since it is nonsensical believe that the Ministries of Education’s curricula learning outcomes is the totality of what pupils ‘need to know’ the benefit resides in the process of equipping students with a way to navigate within a field of information bombardment. A way to model how to navigate is by repeated learning opportunities of problem solving using the six D process outlined by Ian Jukes. The six D’s of Ian Juke’s problem solving model coincide with the essence of A Blended Curricula Deliverance Program because the time within an educative setting is focused upon cognitive development by providing opportunities for the pupils to showcase their interpretation and applicability of curricula through the context of addressing real world problems and issues. The relevancy of this framework is that time within the educative setting can be used to readily prepare pupils for summative assessments expected by the Ministry of Education whilst more
importantly providing a formulaic internalized model of problem solving. The intention is for the students to internalize these experiences. Since the student requirement is to be active participants in creating, defining, negotiating the problem being studied the motivation for learning is going to increase.

According to Ian Jukes the definition of solution fluency there are six components that are classified as: define, discover, dream, design, deliver and debrief (Juke, 2010). The benefit of exploring each of these ‘d designations’ and the applicability of principles of A Blended Curricula Deliverance Program in how they coincide and enhance an educational framework is completed within the third chapter. The example of ‘selecting a classroom pet’ will be used to illustrate the application of A Blended Curricula Deliverance Program and the solution fluency model.

The focus within the fourth chapter is to emphasize the need to have a daily praxis that involves a form of curriculum integration. Irrespective of the challenges inherent within defining broad educational terms such as integrated curriculum and interdisciplinary curriculum, the focus should reside in how to create integrated units that are curriculum based, relevant to the modalities of the target populace, and meaningful for students. In addition, the curriculum should challenge students to solve real world problems.

A primary benefit derives from a shared responsibility for the educative setting between the pupils and educator alike by selecting a model for curriculum integration. The principles within A Blended Curricula Deliverance Program demand a reciprocal shaping between educator and pupil. This reciprocal shaping transpires as the educator and pupil engage in constructivist-oriented activities. Strive to give pupils experiential
learning opportunities whereby knowledge is ascertained by reliance upon sensations and perceptions in a co-navigational experience. Perhaps the outcome is for a pupil to develop meta-cognitive and collaborative skill sets so they may navigate within this exhilarating and nuanced disposition into the world.

Upon consideration of the aforementioned factors educators are encouraged to incorporating A Blended Curricula Deliverance Program as a means for implementing curriculum integration in a strategic manner. The (ABCDP) program can assist twenty-first century educators in dealing with the multitude of challenges present within any educative setting.
Chapter Two: Relevancy of Literature Review

Chapter two aims to expand on the literature touched on in the introductory chapter. The purpose of this chapter is to inform readers about curriculum integration: what is curriculum integration and what have we as a community of researchers and practitioners already learned about curriculum integration. It is my aim to review the research, the concerns that have been identified, and any gaps in the research literature. To accomplish this, I begin by examining the theoretical understandings of curriculum integration including definitions of curriculum integration. I then examine selected research related to curriculum integration and endow a few models of curriculum integration. Finally, I confer about some of the correlation, and perhaps causal, implications curriculum integration will have on education.

"The very notion of 'integration' incorporates the idea of unity between forms of knowledge and the respective disciplines" (Pring, 1973, p. 135). Execution of this concept is limitless. Inherently this aforementioned vastness of educational praxis (choice) for the deliverance of curriculum represents the magnitude of teaching. In addition, it is necessary for educators to evaluate these definitions, of curriculum integration, within the sphere of context and content specificity. Therefore by examining curriculum integration with a mathematics teacher the context of integration could imply a blending of various mathematical concepts versus integration among multiple subject areas that can showcase the interconnected nature of mathematics within all subject domains. Simply put depth versus breadth. Going “deeper” within one particular curriculum expectation versus connecting that expectations to others subject areas.
The correlation between an interdisciplinary approach and integrated curriculum is great. Several educators assert that interdisciplinary studies can be viewed as a redefining or perhaps, enhancement of content specific knowledge. (Kain, 1993).

In Jacob’s (1989) definition: interdisciplinary means conscientiously applying methodology and language from more than one discipline to a theme, topic, or problem.

There are various forms of interdisciplinary instructional methods. For instance a school may select an interdisciplinary team approach, in which teachers of different content areas assigned to one group of students who are encouraged to correlate some of their teaching (Vars, 1991). The application of a thematic unit is the most frequently applied form of integrated interdisciplinary instruction (Barton & Smith, 2000). The thematic unit has a common theme that is explored within multiple subject areas.

Integrated curriculum units are diversified because the deliverance of these units dependent upon three variables: context, educator’s personal pedagogical disposition and educational institution whereby the integrated curriculum occurs. It is beneficial to explore each variable in further detail. First, defining the context in which curriculum integration is being applied is essential. Within any specific curricular subject there is opportunity to integrate multiple expectations from that one subject domain versus integration among other subject disciplines. Second, the “educator’s personal pedagogical disposition” meaning their willingness to engage in this challenging and exhilarating endeavor, is of importance. The decision to deliver curriculum, in an integrated manner, is a personal choice as the Ministries of Ontario have yet to mandate a constructivist-oriented approach as the preferred form of instruction. Thirdly, the educational institution by which integrated curriculum is being utilized. Currently, within many Ontario
elementary schools integrated units are organized according to thematic units. A sort of “wholeness” is being presented for the students to make connections of multiple curriculum areas and see the thematic unit from a macro-level. In contrast, at a university level, integrated curriculum is often presented within the scope of dissection, at a microscopic level.

Irrespective of the challenges inherent within defining broad educational terms such as integrated curriculum and interdisciplinary curriculum, the focus should reside in how to create integrated units that are curriculum based, relevant to the modalities of the target populace, and meaningful for students. In addition, the curriculum should challenge students to solve real world problems.

Research Embracing Curriculum Integration

One approach towards a better understanding of human cognition is cognitive neuroscience. Cognitive neuroscience lies at the interface between traditional cognitive psychology and the brain sciences. It is a science whose approach is characterized by attempts to derive cognitive level theories from various types of information, such as computational properties of neural circuits, patterns of behavioral damage as a result of brain injury or measurements of brain activity during the execution of cognitive tasks (Banich, 1997). Cognitive neuroscience helps to understand how the human brain supports thought, perception, affection, action, social process and other aspects of cognition and behavior, including how such processes develop and change in the brain over time (Thagard, 2004).

Cognitive neuroscience becomes a very important approach to understand human cognition, since results can clarify functional brain organization, such as the operations
performed by a particular brain area and the system of distributed, discrete neural areas supporting a specific cognitive representation. Another importance of cognitive neuroscience is that cognitive neuroscience provides some ways that allow us to "obtain detailed information about the brain structures involved in different kinds of cognitive processing" (Eysenck & Keane, Cognitive Psychology, p. 521).

The research emerging from cognitive sciences is relevant for curriculum and pedagogy. The relevancy exists because the emerging cognitive neuroscience research has assisted in the creation of an educational philosophical view entitled "constructivism”. Constructivism refers to providing students with learning opportunities that launch students as they construct their own knowledge. After all, the essence of education is the field that borrows from many other fields (Trifonas, 1993.)

In accordance with Eric Jensen’s book, Teaching with the brain in mind (Jensen, 1998, p. 35) "The single best way to grow a better brain is through challenging problem solving. This creates new dendritic connections that allow us to make even more connections”. As an educator, defining what constitutes ‘challenging problem solving’ is a foundational question. Any attempt to qualify this concept, should be based upon negotiable dialoguing between pupils and educator. The notion of reciprocal dialogue will be explored via two educational terms: triangulation (student voice) and pedagogical documentation (educator voice).

One component of be an educator, is being accountable via the nature of assessment. Whether conducting assessment for learning or of learning, an educator must have ‘sufficient proof’ of a students’ learning. By using a process known as triangulation, educators can obtain data of student learning from three different sources. These sources
are conversations, observations, and products. Conversation is used to talk with students in a less formal, less structured way; these conversations can take place as students enter the classroom and in the halls of the school between classes. Observations take place during class time, while students are involved in individual, pair or group work. The teacher will circulate around the room and observe student learning. Observations can be documented using a check list (which outlines specifically what the teacher is looking for on that particular day) or anecdotal notes (the teacher simply makes written comments about what a student is doing, how they are working and what concepts they have grasped. (Rohner, R.P., 1975).

There are positive outcomes that can occur when triangulation cornerstones are applied to an educative setting. First, conversing with a pupil in a frequent manner can establish a balance sense of rapport. Rapport can emerge in the recognition that the pupils voice, opinion and experiences are of relevance when constructing meaning and knowledge about curriculum. Second, as an educator your approach and ways of gathering anecdotal evidence from observation is momentous. As an educator gathers information the need to do so in a stealth manner is essential. Being stealth simply means that by using technological devices, as unobtrusively as possible, one will document the learning process as it happens at an explosive rate. A benefit of this ‘stealth approach’ of “trying to capture these moments of learning in time” (this process) is because it provides an opportunity for learners to engage in contemplation regarding physical movement, perceptible sensory exchanges, and non-verbal cueing systems. Simultaneously allowing pupils to engage in self-examination and explore group dynamics, can lead to being mindful.
The notion of mindfulness coincides with being present in every moment of one's existence. One way of being mindful is through an observation of one's breath. The observation of the breath can allow people to engage in a constant form of meditation by simply having an awareness of one breath. By maintaining this ‘awareness’ and being mindful of every moment learners can “observe” first hand, what is transpiring, emerging and radiating from oneself without judgment but with awareness. A way of obtaining ‘a mindful state’ is when a learner can strive to quiet the incessant cognitive-physical manifestations and listen to one’s essence flow via the breath. Breathing is a fundamental component for human functioning. Without freshly oxygenated blood, most humans can sustain life for very few minutes. (Moore, L. G., June 2001).

This fact is of importance because recommending “a mindful state of being”, by observing one’s breathe, encourages learners to intimately be aware of oneself at any given moment. Being mindful can assist pupils as they navigate within every aspect of being at any given moment. Let’s examine the following situation: if two students were engaging in a think-pair share activity, consideration of the following communicational aspects: body language, auditory utterances and breathing patterns are necessary. For example: if two students are engaged in a think-pair share activity and there is a synergistic connection transpiring, potential outcomes could be: mirrored body language, increased auditory sounds and shallow intakes of breathing. A key concept within the previous statement is “synergistic connection” which implies a state of agreeableness of a particular experience. However, the exact physiological descriptors could be used to describe a physiological response to a perceived “threat or hostile experience”. When there is a perceived threat the body physiologically engages in a phenomenon entitled:
fight or flight response”. This response actually corresponds to an area of our brain called the hypothalamus, which—when stimulated—initiates a sequence of nerve cell firing and chemical release that prepares our body for running or fighting. When our fight or flight response is activated, sequences of nerve cell firing occur and chemicals like adrenaline, noradrenalin and cortisol are released into our bloodstream. These patterns of nerve cell firing and chemical release cause our body to undergo a series of very dramatic changes. Our respiratory rate increases. Blood is shunted away from our digestive tract and directed into our muscles and limbs, which require extra energy and fuel for running and fighting. Our pupils dilate. Our awareness intensifies. Our sight sharpens. Our impulses quicken. Our perception of pain diminishes. Our immune system mobilizes with increased activation. (Friedman, H. S., & Silver, R. C., 2007). The necessity of examining this particular think-pair share activity was to reiterate that by encouraging mindfulness provides students with coping mechanisms to gage and engage their ‘created and perceived reality’ with patience, peace and harmony.

As for the products pupils produce, the benefit of a triangulation approach is the negotiable aspect of the “end product.” Intentionally creating an educative environment where self-examination and personal choice determine the culminating product is useful for two reasons. First, as students take part in dialogues regarding the assessment process, two goals are being achieved: the student is engaging in meta-cognitive skills sets through contemplation. The students are contemplating and self-assessing, when negotiating, via dialoguing, what product represents “best work”. Meta-cognition can be defined as “thinking about one’s own thinking.” Eisenberg (2010) reviews the research on young children’s emotion-related self-regulation, which is the set of “processes used
to manage and change if, when, and how one experiences emotions and emotion-related
motivation and physiological states and how emotions are expressed behaviorally” (p. 681). This emotion-related self-regulation refers to monitoring and regulating the impact
of emotions and motivational states on one’s performance and parallels the regulation of
cognition involved in the executive functioning dimension of metacognition (Einsenberg, 2010). It is appropriate to associate these dialogues with meta-cognitive acquisitions
because of the self-advocacy aspect. Each learner is given the opportunity to negotiate
and select what products will be used to determine a “mark or grade.” There is a
cognitive aspect as pupil retrieve ‘information from the neuronal connections or schemata
within the cerebral cortex. This ability to use contemplation as a means to formulate
thought and articulate into communicative patterns is paramount. The ability to
communicate effectively is linked to the second benefit: self-advocacy skills. Self-
advocacy is when pupils are able to express clearly what they require in order to be
successful. This assertion is made because by engaging in a blended curricula deliverance
program pupils can become profoundly aware of what they require to be ‘successful’. An
awareness of ones learning styles and multiple intelligence modality results in knowing
what elements are required to set themselves up for ‘successful learning’. These
requirements are determined and expressed by each student based upon unique needs and
specifications. For example: a pupil can request a preferential seating placement as a
strategy to experience success. An association from this self-advocacy can imply that
irrespective of what life experience or situation arises, knowing how to advocate for
oneself is imperative. A correlation exists between an application of the Gradual Release
of Responsibility Model and self-advocacy. Within all educational setting, Lev Vygotsky
envisioned instruction that moved from explicit modeling and instruction to guided practice and then to activities that incrementally positioned students into becoming independent learners. The teacher guides the students to a point ‘planned obsolesces’ on the part of the teacher “…where the student accepts total responsibility for the task, including the responsibility of for determining whether or not one is applying the strategy appropriately (Pearson and Gallagher, p. 34, 1983.) Thus an aim for an educator is to aid the pupil along in the process of learning, with the intentions of eliminating one’s presence and have the student flourish on their own. As Buehl (2005) posited, the Gradual Release of Responsibility Model “emphasizes instruction that mentors students into becoming capable thinkers and learners when handling the tasks with which they have not yet developed expertise” (Buehl, D., 2005). Overall, educators have an opportunity to help assist pupils in illumination that readily equips them to prosper when set out into the ever-changing landscape of life. Upon examining the presence of student voice, it is useful to see the potential impact upon teacher assessment and experience.

The second benefit of this reciprocal dialoguing and mutual shaping of assessment activities is two fold. First, it allows educators to be professionally challenged because allowing for various student products requires effort to co-create varied rubrics. The standard paper and pencil task may or may not be the preferred choice of a student populace to showcase best work. Similarly, the opportunity to “assess or grade” varied projects is beneficial as it is non-repetitive. The more varied a learning/assessment experience is the ability to maintain interest is more probable. An example is the use Mnemonics. Mnemonics aim to translate information into a form that the human brain can retain better than its original form (Levin, Joel R.; Nordwall, Margaret B., 1992).
Mnemonic learning strategies require time and resources by educators to develop creative and effective devices. The most simple and creative mnemonic devices usually are the most effective for teaching. In the classroom, mnemonic devices must be used at the appropriate time in the instructional sequence to achieve its maximum effectiveness (McAlum, H. G., & Sharon S., May 2010).

Secondly, as educators provide students with varied assessment opportunities, an educator can monitor and ensure that the pupils are challenging themselves by not just representing learning through their preferred modality or intelligence. For example: if every product, a pupil submits can be categorized as verbal-linguistic in essence (i.e., an essay), by recommending that they try and create a three-dimensional product will tap into the visual-spatial intelligence. Just as educators, need to be cognizant of ones preferred method of expressing curricula and vary the deliverance of information is a multitude of ways, encouraging learners to do the same is valid.

Giving the learner a role in the assessment process, can promote an investment in learning thus increasing student motivation. Educators can also involve students in assessment by using student self-assessments. Therefore, one can deduce that triangulation within assessment, is grounded upon on-going dialoguing between pupils and educator.

Exploring the hermeneutical nature of pedagogical documentation and educators voice is required.

Now that a fractional aspect of the assessment component of being an educator
was considered, the questions of ‘why’ and ‘how’ an educator devises “challenging learning opportunities” (Jensen, p. 35, 1998) still remain. A consideration regarding ‘how to’ deliver curriculum expectations is of utmost importance. Currently educators in Ontario are expected to address hundreds of curricular expectations per grade level. In addition, educators have the Ontario College of Teachers issuing ‘qualifiers’ as to what constitutes “best practice” within an educative environment. A sub-section of expectations, reside within an acknowledgement that each school board and individual school has a particular set of educational variables that need to be addressed on a daily basis. Given these factors it is not surprising that some educators may experience trepidation and cognitive dissonance because trying to navigate within this educative landscape of “Guiding Principles” can be overwhelming. At the Centre for Research for Teacher Education and Development at the University of Alberta, a report entitled: ‘Early Career Teacher Attrition: Problems, Possibilities, Potentials’ (April 30th 2012), affirms this reality. Two resonant threads from this report are prudent. First, the notion of support and second, the correlation of the looking glass theory and real versus ideal expectations once inducted into the teaching profession. (Schaefer & Clandinin, 2012).

In Alberta 40% of beginning teachers leave the profession in their first five years of teaching. (Guarino, C. M., Santibañez, L., Harris, D.M. & Daley, G. A., 2012). The following exert explains the profound impact, upon educators, when one strives to navigate and manage amongst the multitude of educative pressures.

“The teachers in the intentions study, and the teachers who left in their first five years, all spoke of support. Support meant different things to different teachers. They spoke of
receiving support on their school landscapes and of support from friends, families and communities. However, they felt somewhat alone as they moved from their school landscapes to their familial landscapes and back again. *They were not clear on how to negotiate the ways to compose lives that allowed them to live out their imagined stories of teaching that involved composing lives on home and family landscapes, and on school landscapes.* It was clear that “support” on school landscapes and “support” on home and family landscapes is not enough. Attention to composing lives attentive to the “wholeness” of who they are, and who they are becoming, as people with home and school lives is necessary if teachers who are beginning are to be sustained in teaching. This feeling of being alone without help in negotiating their way through complex home and school district landscapes was also apparent for the teachers who have not taught.” This research finding, reverberates the urgency for educators to be given strategies to cope, reduce stress, and dispel disparaging self-talk.

Similarly, the second resonate thread, further expresses how the ever-present educative principles, guidelines, policies and recommendations for educators to self-regulate and surveillance oneself can be problematic.

“Many teachers spoke of the bumping up of their imagined stories to live by as teachers with the school stories that shaped their professional knowledge landscapes. Each teacher wanted to teach in ways that expressed their personal practical knowledge. They spoke of being ‘a’ teacher rather than being ‘the’ teacher. ‘The’ teacher suggested all teachers were the same.”

A problem stems from the fact that many of the current educative principles, guidelines
and policies often discredit exceptionalities and variance in interpretations upon praxis. In as well the correlation between the concepts of “I” connects to the looking glass theory. The connection resides in the fact that just as students try and quantify with a sense of identity and notions of self, educators are simultaneously engage in the same process. Just as each pupil arrives, into any educative setting, with varied home, economic, societal, social and self expectations governing themselves, the educator is susceptible to paralleling educative pressures.

The transaction how the students orientate and define themselves through there experiences in the classroom, the above statement illustrates the reigning power and influence of the guiding principle have upon every moment an educator is placed within that role.

Being aware of these mirrored experiences, gives more credit to a blended curricula deliverance program (ABCDP) for the implicit and explicit expectation of ‘opening up’ educator and pupils to the notion that all educative experiences are a process that are enriched when an encouragement to courage to “be” is of importance. A “courage to be” means allowing oneself to be present and mindful of the present moment by observation of one’s breath and being tapped into the basic human senses.

From the examination of this report an important fact emerged: educators should strive to support those that are entering the profession. This protection and support is of vital because the study identified that although many teachers left classroom teaching they somehow tried to teach in some capacity. For example: many teachers had left the classroom to engage in other aspects of education:
“The teachers who left, and the teachers who graduated but who did not take up teaching positions in Alberta K-Grade 12 schools, found ways to continue to live out their imagined stories of being teachers, whether that was through coaching, working with families, teaching in other institutions, preparing materials for teachers and so on. These other possible ways to teach were not often made apparent to them in teacher education.”

Based upon the previous examination of educative expectations and pressures, the answer of ‘why’ exploration and examination of the current educative field is necessary. An overview of three current types of integrated models is vital. The ‘how’ to approach curriculum as a way to approach the blending of all educative expectations is useful.

One reason sustaining the thrust for integrated curricula is an approach to education that is discipline-based education may not be an effective as it could be. When curriculum is delivered in a solely discipline-based way it is being delivered in a fragmented way. The ‘chunking’ or ‘fragmenting’ of information that is professed via the educator is spliced into ‘subject specific compartments’. This is an issue because within human cognitive functioning information is placed into interconnected webbing and dendritic connections that are personalized to the person. ‘Knowledge’ or ‘new information’ is woven to blend within a personal schemata and mind map. In the realm of neuroscience, researchers are only beginning to understand the nature of meaning making and cognitive functions. What is noted is that often students are able to acquire knowledge for a particular test and subject area but the ability to generalize and integrate that knowledge within other elements of their work is problematic. For example: pupils are given a weekly spelling test. The students work with educators for five days and
successfully memorize the phonetic spelling of the words required on the test and score well. This may be considered success. However, an issue arises in the fact that those words are not revisited and linked with the following weeks word list. The problem is two fold. One the pupils simply memorized and used cognitive functioning to store the information within short-term memory versus long term memory. A different approach to the bi-weekly spelling test would be to encourage the pupils to use a mnemonic device. A mnemonic strategy is an approach to acquiring information whereby the pupils personalize the information to themselves. The more extreme a mnemonic device is the more likely a person is to rapidly access that information during a test taking situation and stored within their own long term memory.

The relevancy for a multidisciplinary approach for delivering curriculum arises because just as the mind and body rapidly interprets, processes and problem solves as a whole, curriculum delivered in wholeness mirrors this fact. Real world problems pupils encounter in every facet of living demand accessing a multitude of cognitive fields, knowledge and experiences to inform any choice, decision and problem solving. Making educational experiences relevant by working symbiotically within humanistic development is advantageous. Therefore, a discipline-based curriculum should be replaced with an integrated curriculum (Kain, 1993).

Models of Curriculum Integration

“Research has consistently shown that students in integrated programs demonstrate academic performance equal to, or better than, students in discipline based programs. In addition, students are more engaged in school, and less prone to attendance and behavior
problems.” (Drake & Reid, 2010).

This aforementioned quote is conducive as it clearly expresses a need for integrated curriculum. The ways in which an educator could actualize and implement this concept is incalculable.

Research gathered by Frogarty & Stoehr (1995) entitled: Integrating Curricula with multiple intelligences: Teams, themes and threads proposes that there are ten most frequently used planning models in the field. The relevancy is not trying to identify an exact number of preferred models but rather looking for underlying commonalities. Amongst these planning models common elements surfaced. Specifically, the following: an emphasis on backward planning from student needs and interest, a combination of subjects, a focus on relationships amongst concepts, an emphasis on projects/tasks, flexible scheduling/flexible student groupings and use of authentic sources that go beyond the textbook. (Frogarty & Stoehr, 1995).

Prior to any engagement to a particular integrated curriculum model, it is essential for educators to be familiar with the curricular expectations. According to the Ontario Ministry of Education curriculum documents, the key concepts remain constant throughout the curriculum from grades one to twelve. Many of the concepts (e.g., systems and structures, change and continuity) cut cross subject areas. In creating integrated learning units, it is important to build upon these connections. (Literacy and Numeracy Secretariat, Ontario Ministry of Education, September 2010).

While planning for curriculum integration can be both challenging and rewarding.
By clustering expectations to meet expressed pupil needs entails creativity, confidence and open-minded “big-picture” thinking. As well, curriculum integration creates increased opportunities to give students practice in meeting a range of curriculum expectations, throughout the program.

Integration of curricula units vary depending upon the context and the educative setting in which the implementation occurs. Within the initial levels of school (K-8) integration occurs more frequently than within the high school and college levels (Loepp, F., 2004). At the primary level integration of curriculum is often centered upon a particular theme or topic. Below is one outlook that further illustrates an elementary school level approach to integrated units and themes:

“Within each of these topic lessons, the curriculum outcomes have been mapped, and each week has both a ‘fertile question’ to guide the learning progress and establish a problem for students to solve, and an assessment task related to a specific ‘focus’ that allows students to demonstrate that they have solved such a problem. Thus, one week, a student might cover outcomes from all of the possible subjects, but the assessment task might relate specifically to Geography. This allows teachers to keep up to date with students' progress in each of the curriculum areas.” (Gatewood, T, 1998).

Present within the educative spectrum, the high school and college level integrated curriculum units are more likely to be based upon problems. (Loepp, 2004).

The need to explore and examine current forms of integrative models of curricula was of significance within Professor Loepp’s paper entitled: Models of Integration. For this
reason, an examination of Professor Loepp research pertaining to three models of curriculum integration: the interdisciplinary model, a problem-based model and a thematic model.

The following integrated models are listed in a generic order without preferential ordering.

According to Loepp (2004) one model of curriculum integration is identified as ‘the interdisciplinary model.’ In this case, ‘Schools group traditional subjects into blocks of time, assign a given number of students to a team of teachers, and expect the teachers to deliver an interdisciplinary or integrated curriculum’ (Loepp, 2004). For example: in the seventh grade Language Arts, Science and Social Studies and educators may get together to create an interdisciplinary unit on Lake Ontario. Lake Ontario is the foundational basis for the unit as an underlying idea in which all other components of the unit emerges from. Each educator would examine the concept “Lake Ontario” and apply a scope of subject-specificity while creating tasks for the student populace. The English educator could link Language Arts to exploring vocabulary words and terminology and using technology to create mixed-media posters promoting preservation of Lake Ontario. The Science educator may focus upon exploring the various life ecosystems at reside within Lake Ontario, while the Social Studies educator may encourage the pupils to research the history of the Lake Ontario. This historical overview may include recognition of how local people rely upon the lake for transport, recreation and food. Providing an interconnected webbing of Lake Ontario in association with the other Great Canadian Lakes is another possibility. This example of a potential interdisciplinary unit
or lessons would be classified as a *multidisciplinary* or *parallel design*, which is defined as units or lessons developed across many disciplines with a common organizing topic (Jackson, A.W. & Davis, G.A., 2000). Flowers, Mertens, & Mulhall identify five important outcomes and findings of their experiences with interdisciplinary teaching and planning: common planning time is vital, schools that team have a more positive work climate, parental contact is more frequent, teachers report a higher job satisfaction, and student achievement scores in schools that team are higher than those that do not team (1999).

A ‘positive work climate’ can be associated with a collaborative collegial factor. An advantage of this model stems from the emphasis for educators to collaborate with one another. This collaborative experience is of importance for three reasons. First, it allows for educators to try and manage within the multitude of curriculum learning outcomes. In the book, Beyond Monet: The Artful Science of Instructional Integration, co-author Barrie Bennett, asserts that one of methods for covering a multitude of curricular expectations, is to implore this approach to lesson planning and delivery. (Bennett, B., & Rolheiser, C., 2003). Furthermore, as educators create a type of mind-map of the school curriculum at a ‘glance’ they can plan, book and research potential field-trips, excursions and guest speakers that can further enhance the unit. A similar notion was recognized within the Ontario Ministry of Education, Capacity Building Series and Early Primary Collaborative Inquiry research findings: “Collaboration over documentation “deprivatizes” the work and assists educators in understanding the importance of being accountable to each other.” (Ball & Phelps, 2008).
Secondly, collaboration and ‘team teaching’ allows for the students to observe with their own senses educators, within the educative setting, share the responsibility of delivering curricula first hand. Students observe ‘what and how’ educators conduct themselves at any given moment so if educators are collaborating and sharing in the joys of delivering curriculum, pupils can bear witness in how the educators work collectively. Having pupils see coherence between an educator’s voice and praxis is idyllic.

Although, Pumerantz & Galanto found that interdisciplinary teaching allows pupils to, “Proceed at a pace commensurate with their interests, skills, and experiences” (1972) the same finding can be applied to the phenomenon of educators evolving within any collaborative process (Pumerantz & Galanto, 1972).

Thirdly, the pupils gain exposure to various educator’s personal modalities and preferences for imparting knowledge. Exposure to a multitude of educator styles can enrich student experiences because interacting and communicating are “essential” and “essence” components of being human.

Fourth, having various educators align the deliverance of curriculum expectations around a centralized topic can help store information within a pupil’s long-term memory. One way that information can be stored within long-term memory is associated with the intervals upon which the learning sequence of information is presented. Within an interdisciplinary model, the pupil is exposed to information pertaining to the underlying topic, in a multitude of ways via various subject areas. A type of immersion occurs as educator and pupil delve into a topic deeply. This assertion is supported within the following article: The way students learn: Acquiring knowledge from an integrated
Science and Social Studies unit (Nuthall, G., 1999). Monitoring student concept attainment amid an integrated social studies and science unit, including post-assessments gathered upwards of one year after the unit, Nuthall (1999) reports that “learning occurs when students experience a sequence of relevant information with no more than two days between each experience. Something occurs in working memory during that sequence that results in a specific knowledge construct being created and stored in long-term memory” (Nuthall, G., p. 310, 1999).

There are three disadvantages to this interdisciplinary type of model. First, an educator can become complacent by repeating the same integrated unit year after year. Just because an integrative unit has been delivered annually does not mean the content is still relevant or meaningful to the current student populace. Second, integrated teaching can disregard the relevancy for a cultivation of subject-specific knowledge sets that are fundamental to become experts in varied industries (Gatewood, 1998). Third, planning an integrative unit requires a great deal of planning. Since administrative timetabling may not allow for educators to meet as a collective team to plan, educators can be forced to create these units in isolation. Therefore educators are inventing integrating units that may not be standards-based and poignant.

A second model described by Loepp (2004) is the ‘problem-based model’. This model is based upon the founding principle that a ‘local problem’ is at the center of the planning and various disciplines focus collectively in solving this particular problem. According to Bonett (2008), planning problem-based model involved three steps: First, educator and student populace select a topic of study based on student interests,
curriculum standards, and local resources. Second, the educator finds out what the students already know and helps them generate questions to explore. The educator also provides resources for students and opportunities to work in the field. Third, students share their work with others in a culminating activity. Students display the results of their exploration and review and evaluate the project (Bonett, 2000). It is of use to examine an example of a problem-based model at the high school level. At Grand River Collegiate Institute in the Waterloo Region District School Board in Ontario, eleventh grade students took on the problem of improving the city image (Drake, 2000). This project did not originate in any subject area; students completed project work in a separate time slot scheduled into the school day. After extensive research, students wrote proposals to renew or enhance the city's image and presented the proposals to a group of external evaluators. Student assessment considered teamwork, critical thinking skills, problem solving, and time management. Interestingly, more than one proposal received serious consideration by the city council (Drake, 2000).

The nature of the problem is an important consideration. According to Loepp the problem should be have technology at the core: ‘Ideally, this model places technology education at the core of the curriculum. Since we live in a highly technological society and technology is a human endeavor, this is a natural way to design the curriculum. With a technological problem at the center, disciplines lend their support in helping to solve the problem’ (Loepp, 2004). Creating learning opportunities whereby the technology works for and from the learning process was reinforced from the Basic Writings: From Being and Time (1927) to The Task of Thinking (1964) by Martin Heidegger and David Krell:
“It is of importance to recognize that the very conception of technology can spring from a naturalist problem solving experience. The technology itself manifested out of the learning process and existed within the mind of those who created it in the learning process” (Heidegger, 1964).

As educators, it is vital for problem-based models to be placed within a context whereby an examination of causal relationships between human use of technology and the environment, are considered. By framing problem-based technological integrated units, under a scope that recognizes that scientific research can only equate for a fraction of the resonating impact is necessary. “The reveling that rules throughout modern technology has the character of a setting-upon, in the sense of a challenging forth. That challenging happens in that the energy concealed in nature is unlocked, what is unlocked is transformed, what is transformed is stored up, what is stored up, in turn, distributed is switched about ever anew. Unlocking, transforming, storing, distributing, and switching about are ways of revealing. But the revealing never simply comes to an end. Neither does it run off into the indeterminate. The revealing reveals itself its own manifoldly interlocking paths, through regulating their course. This regulating itself is, for its part, everywhere secured. Regulating and securing even becomes the chief characteristics of the challenging revealing” (Heidegger & Krell, 1964).

By co-creating problem-based models that attempt to fathom the impact that ‘technology has and can have’ upon all facets of organisms within planet earth, is useful. “Modern technology too is a means to an end. That is why the instrumental conception of technology conditions every attempt to bring man into the right, relation to technology. Everything depends on our manipulating technology in the proper manner as a means.
We will, as we say, “get’ technology “spiritually in hand.” We will master it. The will to mastery becomes all the more urgent the more technology threatens to slip from human control” (Heidegger & Krell, 1964).

A benefit of this dispositional approach, can aid in creating twenty-first century learners who identify themselves as inexplicably connected. The words expressed by Martin Heidegger and David Krell concurs with this outlook:

“Wherever man opens his eyes and ears, unlocks his heart, and gives himself over to meditating and striving, shaping and working, entreating and thanking, he finds himself everywhere already brought into the unconcealed. The unconcealment of the unconcealment has already come to pass whenever it calls man forth into the modes of revealing allotted to him. When man, in his way, from within unconcealment reveals that which presences, he merely responds to the call of unconcealment even when contradicts it. Thus when man, investigating, observing, ensnares nature as an area of his own conceiving, he has already been claimed by the way of revealing that challenges him to approach nature as an object of research, until that object disappears into the objectlessness of standing-reserve” (Heidegger & Krell, 1964).

A benefit of a problem-based model resides in the potential to focus curricula efforts towards selecting a highly relevant problem. The opportunity for educator and pupil to methodically create, examine and approach a problem that is meaningful to a particular educative setting is useful. Research tells us that students become involved in learning when tasks enable them to answer their own questions and explore their own interests (Duke, 2004; Duke et al., 2006; Howes, Lim & Campos, 2007; Ontario Ministry
of Education, 2004). Teachers report that students “come alive when they realize they (are) writing to real people for real reasons or reading real-life texts for their own persons” (Duke et al, 2006).

Second, since the problem selected evolved from the student populace, taking ownership by becoming invested in the process is favorable. Studies of project-based programs show that students go far beyond the minimum effort, make connections among different subject areas to answer open-ended questions, retain what they have learned, apply learning to real-life problems, have fewer discipline problems, and have lower absenteeism (Maxwell, J. A., & Loomis, 2003). A limitation of this integrated model lies in the fact that creating a problem that encapsulates all curricular expectations in a multifaceted level is challenging.

The third model of integrated curriculum is known as the ‘theme-based model’. Within this model, curricular subjects are taught in varied blocks but the linking resides in a theme or themes interwoven across the whole curriculum. Often three or more subject areas are involved in the study, and the unit ends with an integrated culminating activity. Units of several weeks' duration may emerge from this process, and the whole school may be involved. A theme-based unit involving the whole school may be independent of the regular school schedule (Relan, A., & Kimpston, R., 1993). At Fitch Street School in the District School Board of Niagara in Ontario, five colleagues collaborated on a two-week, cross-grade curriculum unit on the Olympic games. Curriculum planning required eight half-hour sessions. Educators grouped students into five multiage classes representing grades four, five, six, and seven. The multiage groups met for one hour daily for nine days. In these groups, students devised a performance task
that they presented on the final day of the unit (Drake, 2000). The educators observed numerous benefits, such as the following: students exhibited excellent on-task behavior, pupils were engrossed both as presenters and as the audience for the half-day performance task presentations and the depth of understanding of topics as a result of their sustained interest around various questions (e.g., Are the Olympics relevant today? Does the Olympic creed stand the test of time?). A benefit emerging from the aforementioned example of a theme-based unit is the basis for the unit was pertaining to a ‘current event’ that was of significance to many nations across the globe. An examination of what nation(s) that were included and excluded from any Olympic Games require a multileveled inquiry involving socio-economic, political and environmental question sets.

The advantage for this particular model is that is allows teacher to take a broad concept and make connections to it within the relevant learning blocks. Although making cross-curricular connections is of use an issue arises due to the necessity of ensuring that themes and thematic units are founded in standards required within the educative expectations. The following quotation, reinforces the importance of standard based thematic units,

“Thematic units can also fall short of teaching in-depth content to students. Often a theme, such as apples, is used to link unrelated subjects, with little deference to students’ prior knowledge or interests. This superficial coverage of a topic can give students the wrong idea about school, perhaps missing the idea of curriculum integration in the first place (Barton & Smith, 2000).”

The implementation of the thematic units should aid in preparing students to generalize knowledge and skill sets into other facets of the educative process. The
intention behind the theme must spring from a curriculum expectation foundation and not simply a clustering of expectations under the guise of a thematic unit.

**How the Three Integrated Models Blend Together**

Based upon the examination of the three integrated models: interdisciplinary, problem-based and theme-based model, there are a multitude of connecting similarities between them. A commonality resides in the educational approach towards delivering curriculum to be based in constructivism. Both educator and pupil work in unison as the application of curricula assists in further enhancement of the learning process. The essential difference each approach resides in the perception of the educator who applies a model. The perception relates to the perceived degree of separation that exists between subject areas. The perception ‘of difference’ is of importance because the context (educative setting) and educator praxis correlates with the implementation of each model. Since these models are simply methods of ‘how’ one can deliver curriculum, it is advantageous for educators to integrate the models as part of their schemata on how to disseminate curriculum. This recognition coincides with the notion that each educative situation varies because each student populace requires new ways of experiencing the curriculum based upon their own unique quality.

It is evident that the three models can fit along an evolutionary continuum (Jacobs, 1989). Standards-based approaches further blur the boundaries of these categories. Multidisciplinary integration might remain somewhat distinct because the procedures of the disciplines are dominant. Current thinking, however, suggests that even interdisciplinary projects should include math and literature/media to be rich and vibrant (Erickson, 1998).
Implications for Implementing Integrated Curriculum

From this review of the aforementioned generic models of curriculum integration, it is evident that the classification and implementation of such a concept, requires innovative thinking and due diligence to divulge within any educative setting.

Selecting a model for integrating curriculum depends upon a variation of mitigating factors. Each of the selected integrated curriculum models has supporting research that favors and hinders the usefulness within any educative setting. As the integrated models are reduced to a common level, there are five implications that transpire: a reframing of how educators parley curriculum, exposure and experience pertaining to constructivist-oriented pedagogy, learning communities, pedagogical documentation and systemic reform. It is of use to explore each of these factors in greater detail.

Irrespective of the type model that is selected, there are constant elements that materialize. First, a reframing of how educators choose to disseminate information upon a student populace is necessary. An existing viewpoint of which an educator acts as a ‘metaphorical umbilical cord’ and pupils have blank Tabula Rasa (Tabula Rasa is the epistemological theory that individuals are born without built-in mental content and that their knowledge comes from experience and perception. Within John Locke’s expression of the idea in An Essay Concerning Human Understanding, in the seventeenth century, tabula rasa was the theory that the (human) mind is at birth a "blank slate" without rules for processing data, and that data is added and rules for processing are formed solely by one's sensory experiences. As understood by Locke, tabula rasa meant that the mind of the individual was born "blank" (Winkler, K.P., p.33-36, 1996), that merely reside within any educative setting to ascertain information, (downwards from the educator) needs to
shift towards a foundational approach in constructivism. In 1993, Pope proffers, “If students are asked simply to manipulate the teacher’s words or respond to them on objective tests, they may never construct a view; but if the students use their own words to think about their experiences, including experiences with words presented by others, understanding becomes a real possibility” (p. 160). When the experiences are used together, students are able to construct knowledge based on their own backgrounds and learn to value inquiry (Plummer, D. M. & Kuhlman, Wilma 2008). Upon recognition of the need for a constructivist approach within educative setting coincides with the second emerging trend: professional development.

Second, prior to the commencement of any constructivist embedded integrated units, educators require multiple opportunities to be ‘exposed’ to constructivist-oriented pedagogy. This ‘exposure’ involves a two-pronged approach. First, administrators must give educative staff time to examine emerging research within the field. The benefit of this time will encourage educators to develop their own cognitive schemata and definition surrounding the complexities inherent to the term ‘constructivism.’ A form of macro-level analysis can occur as educators explore existing models and shift through standard based integrative units indicative with their own pedagogical outlook.

Secondly, educators require multiple opportunities to ‘experience’ constructivist-oriented approaches to delivering curriculum. Experience can be dual in nature. From a micro-level, an educator can ‘observe’ an educative setting that practice a form of constructivism with a student populace, i.e., a lesson, task or culminating activity. An addendum to this ‘observation’ is participating with the pupils as the ‘lesson, task or
culminating activity’ evolves. It is essential to note, that the very presence of “an additional educator” within the space, will likely alter the behavioral and communicative output patterns of the pupils being observed. This point stems from a study from the Weizmann Institute of Science in Rehovot Israel entitled: Quantum Theory Demonstrated: Observation Affects Reality. On February 26, 1998, a ‘bizarre’ premise of quantum theory, states that by the very act of watching, the observer affects the observed reality. The scientists found that the very presence of the detector-"observer" near one of the openings caused changes in the interference pattern of the electron waves passing through the openings of the barrier. In fact, this effect was dependent on the "amount" of the observation: when the "observer's" capacity to detect electrons increased, in other words, when the level of the observation went up, the interference weakened; in contrast, when its capacity to detect electrons was reduced, in other words, when the observation slackened, the interference increased. Weizmann Institute Of Science (1998, February 27). This study is of relevance for it gives a foreshadowing as to what ‘energetic potential’ transpires within every nanosecond in an educative setting. A referent to ‘interference’ provides educators with a need to consider how the environment, pupils, and educators collide.

By providing educators with professional development opportunities that involve acquiring knowledge, from current constructivist models and participatory experiences, the probability of constructivist ways of delivering curricula will occur, increases.

Third, educators benefit from becoming members of a learning community. The learning community refers to working with peers to make meaning, create and develop
integrated units. An association with a psychological term: ‘Flow’ is of importance. Conditions of Flow, defined as a state in which challenges and skills are equally matched, play an extremely important role in the workplace. Since flow is associated with achievement, striving to achieve and develop one’s flow state could have concrete implications in increasing workplace satisfaction and accomplishment. Coert Vissar (September 26, 2012) does a review of Mihaly Csikszentmihalyi’s book “Good Business: Leadership, Flow and the Making of Meaning,” and highlights “good work” in which one “enjoys doing your best while at the same time contributing to something beyond yourself.” (Vissar, 2012).

The potential for educators to do ‘good work’ increases because of the reality that working with colleagues in a focused manner that requires an end product (an integrated unit), makes them stakeholders and therefore less likely to engage in a social psychological term known as diffusion of responsibility. A diffusion of responsibility refers to the fact that being with a crowd can make it easy to avoid personal responsibility for taking action (Darley & Latané, 1968). A diffusion of responsibility may occur when educators are simply given a prefabricated integrated unit to infuse within their daily practice. Sometimes, educators are not receptive to ‘integrated units’ for the reason that the unit was created by ‘an anonymous group of educative experts’. These experts simply do not have the firsthand knowledge of the intricacies and requirements of a particular pupil populace to the extent that the primary educators have.

Similarly, the notion of first hand experience blends with a second aspect of educators becoming part of a learning community: their own educative situation. This ‘educative setting’ lends to the suggestion that the educator is problem solving, along side
with their pupils, problems that have a multitude of answers and relevancies. Educators, “must be particularly careful not to assume that children see situations, problems, or solutions as adults do, instead good teachers must interpret what the child is doing and thinking and attempt to see the situation from the child’s point of view” (Clement & Sarama, p. 4., 2009). By working collectively, a resonating impression toward each pupil can be as follows: “Celebrating the rights of children is central to this approach…this process nurtures plurality of ideas and voices.” (Wilson, 2012).

Learning is a complex process impacted by many factors, including the feelings and emotions of the learner. Within the Ontario Ministry of Education, Capacity Building Series entitled: Integrated Learning in the Classroom, the following exert addresses this fact:

“Particularly, in young children, feelings and emotions affect the learning experience in a positive or negative way. An educator’s relationship with a child can play a huge role in a successful learning experience. Educators are seeing these relationships strengthened as the use documentation strategies to continue to grow in an understanding of their students’ interests, learning and developmental needs. As educators step back to listen to how a student is thinking and allow the child to take the lead in the learning, students become partners in the learning process. Many educators are identifying student led inquiry as a vehicle to strengthen this learning process” (Olsen, J., 2008).

As educator and pupil engage in a symbiotic relationship, a need for documentation emerges. The issue of varied and diverse assessment techniques links to the fourth implication of integrated curriculum models.
Fourth, documentation is a key component within any educative setting. The importance of documentation that reflects the dialectic nature between educator and pupil creates a ‘reflective’ and ‘reflexive’ atmosphere towards assessment for and as learning. The reflective component deals with both the pupil and educator in a constant state of contemplation regarding all aspects of one’s input into the educative setting. Pupils have responded positively when they realize that their teacher is examining their work, interested in their ideas and affirming their efforts. This indicates to them that their teacher values their thinking and what they are doing (Yu, 2008). In addition, when the students engage in a self-assessment “they become directly involved in the learning process, acting as the ‘critical connector’ between assessment and improvement” (Earl, 2003). When students are engaging in reflecting on their learning throughout the process than at the end, the potential for engagement and learning increases (Wilson & Winterbottom, 2010). Creating an educative setting where the pupils are encouraged, and perhaps expected, to engage in metacognitive skills can be beneficial. The word metacognition’ was first used by J.H. Flavell in 1976. Metacognition refers to one’s knowledge concerning one’s own cognitive processes or anything related to them, e.g., the learning-relevant properties of information or data. For example, I am engaging in metacognition if I notice that I am having more trouble learning A than B; if it strikes me that I should double check C before accepting it as fact (Flavell, J. H. 1976, p. 232).

The relevancy for students to reflect, ponder and examine their own thinking and learning experiences via meta-cognitive tasks is because they may aid in helping the pupil articulate and express learning in a consolidated manner.
Once a pupil and educator converse about what ‘constitutes a sample of best work’ the choice of assessment representation is bountiful. The use of a student portfolio, co-created rubrics and a culminating task are relevant as it emerges from a place of student-focused ownership.

An astounding ‘potential consequence’ of this need for self-reflection can lead to the development of an internalized locus of control. An internalized locus of control is a personality psychological term that deals with how one interacts with the world. Locus of control theory in personality psychology refers to the extent an individual believes that they can control events that affect them. An understanding of the concept was created by Julian B. Rotter in 1954. A person's "locus" (Latin for "place" or "location") is conceptualized as either internal (the person believes they can control their life) or external (meaning they believe that their decisions and life are controlled by environmental factors which they cannot influence). Individuals with a high internal locus of control believe that events in their life derive primarily from their own actions; for example, if a person with an internal locus of control does not perform as well as they wanted to on a test, they would blame it on lack of preparedness on their part. If they performed well on a test, they would attribute this to ability to study (Carlson, N.R., et al. 2007). In the test-performance example, if a person with a high external locus of control does poorly on a test, they might attribute this to the difficulty of the test questions. If they performed well on a test, they might think the teacher was lenient or that they were lucky (Carlson, N.R., et al. 2007).

The development of pupil’s locus of control is a relevant consideration for educators
because if any encouragement of self-reflection can foster an internalized locus of control is excellent. By allowing pupils to readily engage in self-examination and reflection upon lived experiences perhaps students are likely to perceive themselves as responsible and capable to flourish and succeed. A residing principle, inherent of education, is to illuminate and provide educative experiences that foster and develop skill sets of responsibility to be accountable for oneself, others and the world.

A pupil must take control of their curriculum, their circumstances and their selves in order to learn and live holistically. William Glasser (1986) advocates this notion of accountability for oneself. Miller (2001) reviews Glasser’s control theory in his chapter on “Community Connections”:

“It is the need to gain power that is central to control theory. If students don’t feel that what they are doing in school is of any importance, they simply won’t learn....The need for power is at the core of almost all school problems.” (Miller, J. P. 2001, p.138).

A secondary aspect of the documentation process refers to the use of assessment as a means of contemplation for the educator’s praxis, a reflexive aspect. A reflexive aspect occurs as a consequence of the outcomes gathered throughout the assessment process. An educator can use assessment as a way to examine, challenge and question their own ideas and biases embedded in everyday practice. The following quote reinforces this fact:

“This shift toward a balance of power moved teachers from seeing themselves as reflective consumers of theory and research to active and equal participants who generate theory and research that can inform practice” (Heidi et. Al, 2009).
The concept of an educator being reflexive is of relevance for the insulation means that within every aspect of any educative moment, an educator must be receptive to adapt, change and mould oneself to fit what a particular situation, pupil and contextual reality demands. This assertion is promoted in the following words:

“To be effective, (t)eachers must simultaneously overplan-making sure they have a variety of resources and activities to accommodate students’ interests-and under plan-remaining flexible.” (Barton & Smith, 2000, p.61).

Using the assessment process as a way to inform instruction and next lessons is an essential distinction. Many pressures arise due to the external thrust for standardized testing. What is of importance is the lens upon which these standardized testing outcomes impact both the student and educator. It is essential that “results” are seen as a ‘snapshot of a moment in time’ and the educator can use the outcomes as a barometer to gauge their own practice. There is no need for rapid categorization, of either the educator or pupils, based upon the results. Kain (1993) discovered that, in schools where there has been an integrated curriculum established, there is ‘greater intellectual curiosity, improved attitude towards schooling, enhanced problem-solving skills, and higher achievement in college.’ Furthermore, Kain (1993) also found that many students felt that integrated curricula were more relevant to the real world, due to real world problems being of an interdisciplinary nature, and this increased both their learning and motivation.

Another varied populace that maintains an investment in the area of the student assessment is the family network. The issue of ‘transparency’ within any educative setting was explored within the Ontario Ministry of Education Early Primary Inquiry
2012 report. It is beneficial to examine the outlook upon pedagogical documentation and the associative links between assessment and transparency of assessment methods. Educators across Ontario are leading learning by authentically listening to observing, and developing relationships with students and their parents. Through careful, systematic, and cyclical documentation of student learning that informs instruction, educators are transforming understanding of children’s capacity to think and learn. Such powerful evidence of student learning to transform understanding about both teacher and learning is commonly known as pedagogical documentation in the early elementary years (Wein, Guyevskey, & Berdoussis, 2011).

Recognizing the need for ‘transparent documentation’ as a strategic tool to showcase constructivist examples of learning is crucial. “Pedagogical documentation stops the train of standardized expectations and slows down our thinking process to consider some topic with exquisite care.” (Wein, Guyevskey, & Berdoussis, 2011). A showcasing a varied samples of student learning and the coinciding original assessment tool is a positive opportunity. The probability for a paradigm shift, regarding the role and nature of assessment, towards a co-constructed format increases. Through pedagogy of listening, educators capture student learning through a variety of ways to make the thinking visible (Wein, Guyevskey, & Berdoussis, 2011). When learning is made transparent, both pupil and educators ‘thinking’ becomes open for shared reflection. The opportunity for communicational patterns to involve the pupil, educator and family network is of utmost importance. Educators and pupils must give the respective family networks an opportunity to formulate, and perhaps alter, their own existing schemata pertaining to constructivism. Just as educative staff and pupils require repeated exposure and
experience with constructivist curricular methods, family networks should be given the same courtesy.

Therefore, the use of pedagogical documentation, in the form of transparent assessment, can act as a gangplank between family network, educator and pupil in terms of understanding and enriched learning experiences.

Finally, in order for an integrated curriculum method for delivering daily curriculum, is considered, systemic reform is necessary. This systemic reform contains two elements. First, all educator certification programs need to pair constructivist theory with experiential placements. Second, standardized assessment pertaining to educative settings, need to be modified to accommodate various manifestations of learning, just as a constructivist-oriented approach demands. An acceptance of various learning outcomes can eliminate cognitive dissonance. Some educators may experience this cognitive dissonance because educators are expected to balance between multiple expectations from standard-based testing and constructivist models. Cognitive dissonance is the term used in modern psychology to describe the feeling of uneasiness when holding two or more conflicting cognitions (e.g., ideas, beliefs, values, emotional reactions) simultaneously (Festinger, 1957). It is the distressing mental state that people feel when they "find themselves doing things that don't fit with what they know, or having opinions that do not fit with other opinions they hold (Spencer & Myers, S. 2006). Thus, if educators are challenged by the prescriptive way expectations are placed upon them and these pressures may not coincide within their own personal educative pedagogical schemata, understanding for this fact is essential. An application for utilizing cognitive
dissonance as an effective tool for growth has emerged into educative settings. Psychologists have incorporated cognitive dissonance into models of basic processes of learning, notably constructivist models. Several educational interventions have been designed to foster dissonance in students by increasing their awareness of conflicts between prior beliefs and new information (e.g., by requiring students to defend prior beliefs) and then providing or guiding students to new, correct explanations that will resolve the conflicts (Monroe & Reade, 2008). Just as the pupil in the aforementioned study, altered existing belief systems to maintain consonance among their cognitions by gathering new information, the expectation that an educator can accomplish the same feat is reasonable. Overall, an acknowledgement for the multitude of educational pressures that exist is vital.

Conclusions

Upon exploration of the implications emerging from integrated curriculum models, further research and exploration is required. Trying to encapsulate or create a clear-cut description of the nature of integrated units has spawned many arguments. Loepp (2004) provides a referent to an argumentative nature, regarding integrated curriculum, by writing the following: ‘Those who would consider astronomy, biology, chemistry, geology and physics as distinct disciplines consider a general science course a step in the direction of integration.’ By comparison, Pring (1973) expostulated that integration 'incorporates the idea of unity between forms of knowledge and their respective disciplines.' This inherent tension, derived from trying to ‘qualify’ and ‘define’ the essence of an integrated model is useful because it shows contemplation towards educational praxis and student experiences. Irrespective of the challenges inherent within
defining broad educational terms such as integrated curriculum and interdisciplinary curriculum, the focus should reside in how to create integrated units that are curriculum based, relevant to the modalities of the target populace, and meaningful for students. In addition, the curriculum should challenge students to solve real world problems.

The research emerging from cognitive science and educational studies suggest that some form of curricular integration can promote learning. It is useful to recognize that there are other ways of measuring students' improvement than simply their test scores, and a number of studies have focused on those. Kain (1993) discovered that, in schools where there has been an integrated curriculum established, there is 'greater intellectual curiosity, improved attitude towards schooling, enhanced problem-solving skills, and higher achievement in college.' Furthermore, Kain (1993) also found that many students felt that integrated curricula were more relevant to the real world, due to real world problems being of an interdisciplinary nature, and this increased both their learning and motivation. Similarly, when constructivist experiences are used, students are able to construct knowledge based on their own backgrounds and learn to value inquiry (Lake, 2000).
Chapter Three: Defining A Blended Curricula Deliverance Program

Based upon the implications within the literature review, conceptualizing the principles that concoct A Blended Curricula Deliverance Program (ABCDP) is necessary. The intention for this educative term is to provide a theoretical framework for an educator to incorporate into their praxis. This educative term is holistic in nature as the educator and pupil engage in the educative process simultaneously. The structuring of experiences is fluctuating to accommodate learning styles, expression of curricula expectations and assessment methods. An animation of curriculum transpires as pupil and educator become mindful of learning opportunities.

A Blended Curricula Deliverance Program will be explained by expanding upon each letter of the term: A represents Awareness (an educator is aware of one’s breathing cycle in relation to being a contemplative practitioner. This awareness can result in an ability to recognize the multitude modalities of intelligences in relation to cognitive science and personal objectives). The B emblematises Blended (how an educator can set up the educative setting: the space whereby pupils frequently reside, for instruction to facilitate the development of learning styles with space for varied group formations). C signifies Curricula (meaning how an educator can aim to integrate curriculum through the application of three models of integration: theme-based model, interdisciplinary model and problem-based model). The application of the models can be implemented according to the level of teacher direction, depth of curriculum blending and integration and student responsibility. Integrating curriculum through the application of model for curriculum integration typifies a need for holistic education. D means Deliverance (the approach of
how an educator can decipher ways to deliver curricula in a manner that is holistic by infusing the concepts acquired within each aspect of A Blended Curricula Deliverance Program).

The relevance for A Blended Curricula Deliverance Program is the recognition of a need for education to be holistic in nature. Holistic education refers to programs that cater to all aspects of being human. A focus is that curricula should be delivered in a manner that increases the interconnectivity of schemata. One way of nurturing cognitive function is promoting awareness of a physicality of being through observation of one’s breathing cycle. As one becomes aware of the breathing patterns, the realization of appreciating the moment is clear. By sensing the value of every moment, pupil and educator can strive to manifest learning opportunities that address community environmental issues. Acquiring knowledge is a passive yet when a pupil has experience with curricula, that the animation of curriculum transpires. Educator and pupil populace interact in a reciprocal manner and as this mutual shaping occurs, the educational process evolves. The pedagogical disposition of an educator provides the foundation for all that occurs within the educative setting. By having a disposition that is aware of the interconnectivity between cognitive functions in input and physiological outputs of a pupil is beneficial. A benefit stems from acknowledging that each person within any educative setting brings a unique cognitive skill set, physical attributes and preferred learning modality. This variance supports the principles of A Blended Curricula Deliverance Program as each component pertains to further developing, enhancing and sharing this fact of variance in a supported way. One goal is for an educator to intentionally plan learning opportunities whereby this appreciation can develop. Any
“turn toward pedagogy” conceived as a challenge to existing conventions of schooling must be understood as entering into a continued legacy of historical contestation. What was and still is at issue of how to respond to such value based questions as what range of purposes schools should serve, what knowledge is of most worth, who should get access to what forms of knowledge, what it means to know something, what notions of authority should structure teaching and learning. This means that any construction of a pedagogy of possibility that takes its insurgent character seriously must be able to locate itself within an understanding of how such a practice enters the discursive tradition” (Simon, R.I., p. 36, 1998). The educative term of A Blended Curricula Deliverance Program can be classified under the realm of holistic education. All pupils require an ability to articulate thought, work collaboratively and value oneself and all that they encounter with openness and respect. Each component of this program provides opportunity for guided and co-constructed learning that builds proficiency through contextual experiences. The principles of A Blended Curricula Deliverance Program originated from observation that by intentionally creating an educative space whereby the focus is upon each pupil is phenomenal. By acknowledging the interconnectivity of oneself and other pupils, the hope is to know that treating all organisms within this planet with the same care for oneself is beneficial. The following words showcase that by applying the principles of A Blended Curricula Deliverance Program pupils can become familiar and honor oneself and thus in turn may see other organisms with a similar cognitive lens of value: “Beyond the objective, which is always already correlative to a prior ‘aim’ and intention to discover—behold an other that reveals itself, but that so precisely in surprising the intentions of subjectivity thought and eluding the form of the look, totalitarian as
presence-eluding the transcendental synthesis. A locus to be sought in the dimensions of the humanity of man: with being in himself and for himself.” (Levinas, E. p. 5, 1999).

The notion that by applying awareness and observation of the breathing cycle the value for oneself can correlative infer value and behold other organisms with the same value. Phenomenal interactions can transpire as educator and pupil use the curricula as a tool to qualify, understand and solve problems that assist in stewardship of the earth.

**Conceptualizing each principle of A Blended Curricula Deliverance Program**

**A: Awareness**

Emerging from the implicative section from the literature review, developing awareness via the use of professional developmental opportunities is required. The intention is for the educator to personalize schemata that approaches the educational process through a constructivist view. The challenge resides for an educator in having an awareness of oneself but striving to move beyond these schemata. The challenge is to provide educative opportunities that mirror, replicate and confirm oneself while intentionally plan variance that differs from ones ideology.

The letter “A” represents an awareness all educators require. The term awareness will be defined based upon an awareness of one’s own approach towards conducting oneself in an educative setting. Having awareness is the recognition of how an educator reconciles and balances with two instructional factors: oneself and one’s preferred method of teaching via dominant learning style.
A fundamental component resides in an assumption of instructing a pupil to utilize their cognitions while addressing all problems that are presented to them. The field of cognitive science is pertinent because of the research trying to encapsulate, qualify and explain the human brain and thought processes in relation to oneself, others and the environment. It is essential to look at some research within the field of cognitive science because of the potential implications and associative links for educators.

Humans perpetually venture to explain our unexampled characteristics. For many our distinctive status comes from possessing a soul or consciousness. For Descartes, the essence of the soul was “only to think” (Descartes, 1637/1960). The ascent of man is a book by Jacob Bronowski (1973) and on page twenty he posits (1973) “Man is distinguished from other animals by his imaginative gifts. He makes plans, inventions, new discoveries, by putting different talents together; and his discoveries become more subtle and penetrating, as he learns to combine his talents in more complex and intimate ways” (Bronowski, J., p. 20, 1973). These words by Jacob Bronowski are allied to the educative process because in theory learning opportunities may require a pupil to attempt to act in accordance with this view. An examination of a philosopher of science Sir Karl Popper is of necessity for his perspective upon the mind and how this perspective was embedded in the creation of a cognitive science term known as the a sense-think-act cycle for it is apropos for educators.

Within the philosophy journal Dialectica, Sir Karl Popper has a section entitled: Natural selection and the emergence of mind this is whereby he argued that the mind emerged from the natural selection of abilities to reason about the consequences of hypothetical actions (Popper, 1978). Rather than performing an action that would have
fatal consequences, the action can be thought about, evaluated, and discarded before actually being performed (Popper, K. 1978). Popper’s position is central to much research in cognitive science (Pylyshyn, Z. W., 1980). The fundamental hypothesis of such classical or symbolic research is that cognition is computation, that thinking is the rule-governed manipulation of symbols that represent the world. Thus the key role of cognition is planning: on the basis of perceptual information, the mind builds a model of the world, and uses this model to plan the next action to be taken. This has been called the sense–think–act cycle (Pfeifer & Scheier, 1999). A consequence of the sense–think–act cycle is depreciated environmental containment over humans. “Among the multitude of animals which scamper, fly, burrow and swim around us, man is the only one who is not locked into his environment. His imagination, his reason, his emotional subtlety and toughness, make it possible for him not to accept the environment, but to change it” (Bronowski, 1973, p. 19). In modern cognitivism, mind reigns over matter. However, classical cognitivism is also subject to competing points of view. A growing number of researchers are concerned that the emphasis on planning using representations of the world is ultimately flawed. They argue that the mind is not a planner, but is instead a controller that links perceptions with actions without requiring planning, reasoning, or central control. They would like to replace the “sense–think–act” cycle with a “sense–act” cycle in which the world serves as a model of itself. Interestingly, this approach assumes that human intelligence is largely controlled by the environment (Oaksford, M., & Chater, N., 1998). Irrespective of these opposing perspectives pertaining to human cognition, what is of importance is that educators recognize that each pupil uniquely creates, and therefore can alter, the environment based upon their own sensory
experiences. The interplay between cognition, body and consciousness is interwoven and formulate the world in which a human experiences.

The position of Sir Karl Popper can be applicable to educators for the reason that a defining characteristic of being human is an ability to engage in reflection about oneself. The ability to engage in reflection of oneself prior to ‘acting’ is of importance because it can implicate an educator to strive to be cognizant of two factors. First, an educator should be compelled to approach the pre-planning stage, involved in creating any learning opportunity, to be composed of pre-calculated or premeditated notions regarding intent, content knowledge, and movement. This pre-planning is merely a visualization of how an educator visualizes the lesson. However the visualization is simply just that: intent for action, utterance and movement, the visualization must be fluid and open to change once the process of manifesting the visualization collides with the student populace. The Differend: Phrases in Dispute, provides a relevant four words that summarize the reality of being communicate as a human being and especially for an educator: “To talk is to fight” (Lyotard, J. F., 1988). These four words from Lyotard’s are of relevance because as an educator to ‘talk’ is to essentially fight against a myriad of experiences that the referent (pupil) has had within their own human development. Therefore as an educator all utterances and action carry significance due to the nature of being identified as “educator” within the current educational system. The hope is that the educative process is one whereby tensions are eased as members within the educative setting express (fight) their viewpoint and that these varied expressions are valued. The dialectic banter that is eluded within Lyotard’s words is a byproduct of all communicative processes. Encouraging pupils to become confident in their beliefs and
articulating them, while simultaneously being receptive and open to similar and opposing viewpoints, will benefit them in every facet of life. Therefore the position of Sir Karl Popper can be applicable to educators for the reason that a defining characteristic of being human is an ability to engage reflection about oneself. This can mean that as an educator the intentional planned learning experiences can undeniably influence, shape and construct how a pupil can approach action, emotion and existing on planet earth. This unfathomable reality of teaching is awe-inspiring.

Research involving the human body-brain connection suggests that the brain-body strive to maintain equilibrium and a balance within the human body. Equilibrium is a perceptual-motor system because it involves a set of shifting constellations of interio- and exeriocieptions, differently weighted and compared depending upon our environment and task, and a host of active patterns of physical compensation, most of them only vaguely conscious, at best (Gibson, J.J. 1979). Minimally, a brief ecological psychology of balance would need to include at least the following: the vestibular system; information from the visual system including the horizon line, parallax, relation of centre of field of vision to visual references, and movement in peripheral vision; sensations on the soles of the feet as well as at joints and other forms of proprioception; sense receptors at the back of the neck as well as a sense of the head’s alignment in space and in relation to the body; the gravity-resisting muscles, usually those of the lower body, and the reflexes that move them to compensate for perturbations in balance (Uttal, W. R. 2003). In 2000, Jerry Fodor’s work entitled: In Critical Condition: Polemical Essays on Cognitive Science and the Philosophy of Mind expands upon the brain-body balance. Fodor points to equilibrium maintenance as a strong candidate for status as a ‘module’. The enormously
varied input feeding into the equilibrium system and its ability to contend with a variety of different circumstances by quickly shifting how it interprets, weighs, and responds to sensory information suggests that, if equilibrium is a ‘module,’ it must have access to a lot of information, shift which sources it prioritizes, and be able to acquire responses (Fodor, 2000). A recognition that the brain and body strive to maintain a balanced equilibrium is important for field of education for two reasons.

One way the brain tries to achieve ‘no cognitive dissonance’ is to seek out situations that support and are consistent with our existing schemata. In essence our beliefs, emotions and views create and alter our experiential reality. This concept is important for the implication for educators. Second, an implicative correlation is that all educators have complex schemata that comprise their personal pedagogical praxis. The challenge is having awareness that by being a human being, all sensations and perceptions of one’s environment, experiences are tainted by a humanistic need to make meaning. A consequence requires educators to become hyper-vigilant of one’s own propensity to present curricula that coincides with beliefs. Actively pursuing varied curricula and viewpoints is a necessity within an educative setting because knowing how to encounter and assess information is an essential skill set of learning.

Due to the examination of the field of cognitive science and the association of how ‘perception’ influences how a person absorbs information, the need for an educator to contemplate about oneself is essential. It is beneficial for an educator to engage in contemplation about oneself pertaining to dominant learning style and modality. Just like the pupils, educators have prior knowledge and varied learning and life experiences that can resemble the current classroom setting. A potential difference is that an educator may
have had educational experiences that do not mimic the current educational expectations for educator standards of practice. For example: an educator may have experienced a singular deliverance of curriculum, from the educator onto the pupil as receptacles for information versus co-constructed reciprocal dialoguing that is encouraged within the educative setting today. This is of importance because by being cognizant of a personal narrative in relation to education, helps formulate a component of how to define, expect and perform as educators today.

This contemplation requires an educator to be aware of what circumstances, situations and methods are most conducive for their own learning. By choosing to engage in this self-contemplation two outcomes can be accomplished: one a recognition that educators will often teach in their own preferred method and by knowing what tools assist them when learning new information is beneficial. The definition of ‘tools or strategies’ may mean group work, visual aids, preferential seating by being close to the educator, the development of mnemonic devices or quiet space. The issue of ‘what tools, strategies or environment cues’ are useful during the learning process has been referred to as learning styles in educational terms. The education terms of “Learning styles’ is a concept used to describe an individual’s natural or habitual acquiring and processing information in learning situations however a core concept is that individuals differ in how they learn (James, W., & Gardner, D., 1995). One model used to classify a learning style is referred to as the Fleming’s VARK model. Learners are classified into three distinct areas: visual learners, auditory learners, and kinesthetic learners or tactile learners (Grasha, A., 1996). Fleming claimed that visual learners have a preference for seeing (think in pictures; visual aids such as overhead slides, diagrams, handouts, etc.). Auditory
learners best learn through listening (lectures, discussions, tapes, etc.). Tactile/kinesthetic learners prefer to learn via experience—moving, touching, and doing (active exploration of the world; science projects; experiments, etc.) (Leite, W. L., Svinicki, Marilla & Yuying, 2009). A benefit from incorporating this philosophical base of learning styles resides in the preparation for educational opportunities. If an educator intentionally creates learning opportunities that contain elements of what each learning style success criterion then an outcome is lesson variance. The variance will be defined as a blended lesson that considers the use of most ‘senses’ of the student populace. Similarly, the educator can encourage the student to reflect about themselves by using this model to engage in self-assessment by deciding upon what learning situation render what they classify as best beneficial and useful to their own learning. The intention is not to ‘inform the student’ or ‘classify’ but foster an exploration of the three distinct styles and allow for self-selection of style. This distinction is of importance because within the education field it is essential to not readily label a pupil one-dimensionally. It is necessary to be aware that by labeling a pupil as predominately one style is only a preferred method in a particular situation. By seeing pupils learning styles as fluid, situational and context dependent is paramount. The following quote summarizes the complexities and erroneous consequence in trying to isolate one predominant learning style: "Humans have evolved to build a picture of the world through our senses working in unison, exploiting the immense interconnectivity that exists in the brain" (Henry, J., 2007).

Although there have been few empirical studies that support the link between learning styles and student success outcomes, the need for educators to vary their method for delivering curricula, is important. The benefit from including a consideration for the
learning styles, ensures for variety of expressive forms, noise levels and differing groupings that will inevitably replicate what the pupil will encounter within lived experiences. Exposure to a variety of ways to gather and receive information is how the body reacts to all stimuli in a multi-dimensional level thus it seems appropriate to try and plan for opportunities that may cater to learning style as the ideology inherent to the learning style classification coincides with the human senses.

If an educator decides to engage in contemplation pertaining to their own cognitive schemata pertaining to pedagogy, praxis and learning modality, a next step is professional development relating to constructivist-oriented practice is required.

A Blended Curricula Deliverance Program is founded upon a realization that ongoing professional development is essential for all educators. Prior to the commencement of any educator placement, exposure to planning and setting up environmental spaces that are conducive to fostering a constructivist-oriented educational setting is necessary. This process involves frequent exposure to recent cognitive science studies that cast insight into the ways in which technologies cast insight into the brain functioning during acquisition of new learning materials. This awareness is necessary as the educative field is about aiding pupils in discovering knowledge so a recognition that if a pupil can create, negotiate, problem solve and articulate their learning the more enriched the learning process can be. This exposure involves both an experiential aspect. Once a theoretical foundation for constructivist-oriented frameworks is explained, being placed within educative settings that practice constructivism is useful. The applicability for this placement is to allow the educator to examine the spatial location of typical educative settings: desks, where the pupils are situated in relation to one another, technological
equipment and the spaces allocated for small and large group formations and the ability to move freely within the space. By gaining this exposure it can result in an educator noting the importance behind the placement of learning tools in influencing the pupils interpretation of the educative space. Also, the classroom environment acts as a symbol to students and others regarding what educator’s value in behavior and learning (Savage, 1999; Weinstein, 1992). As with other aspects of the educative process, the influence of the physical environment recalibrates those who reside within.

Research on the classroom environment has shown that the physical arrangement can affect the behavior of both students and teachers (Savage, 1999; Stewart & Evans, 1997; Weinstein, 1992), and that a well-structured classroom tends to improve student academic and behavioral outcomes (MacAulay, 1990; Walker, Colvin, & Ramsey, 1995; Walker & Walker, 1991). In addition, the classroom environment acts as a symbol to students and others regarding what teacher’s value in behavior and learning (Savage, 1999; Weinstein, 1992). Some studies show that things such as color, desk placement or even lighting can all affect a student's temperament and ability to be productive. Although lesson planning in still a top priority, teachers may want to consider putting some additional time and thought into their classroom environment. The setting could have a positive impact on students and the overall school year.

To summarize the interplay of the environment and a consideration of learning styles are constant variables that influence all those who reside within any educative setting. Upon consideration of learning styles a potential drawback of learning style models is for an educator to not restrict and label the pupil as predominately one style
only. Learning styles are a tool to aid in instructional planning but a recognition that a pupil can change and adapt according to every situation is essential to remember.

Although there has been frequent studies that support the link between learning styles and student success outcomes it seems that it is still useful for educators to vary their method for delivering curricula in a varied way. The benefit from including a consideration for the varied styles ensures for variety of expressive forms, noise levels and considerations of different groupings that will inevitably replicate what the pupils will be required to deal with in lived experiences.

The ‘A’ within A Blended Curricula Deliverance Program refers to awareness. Awareness specifically is defined as being receptive to four components (aspects): familiarizing oneself with the research with the field of cognitive science and correlative ties with for educators. The correlative link is that cognitive science studies given insight into how educators came to develop their schemata about pedagogy and how an individual’s perception alters the information one gathers. A consequential outcome is for educators to consider learning styles and how planning of the physical educative setting is necessary to set oneself and the student populace up for success. This awareness involves self-contemplation and joy, as the time within any educative setting will be unparalleled.

B: Blended

The B within A Blended Curricula Deliverance Program stands for blending. The definition of blending means that an educator should integrate multiple curriculum expectations, from numerous subject areas, using a different approach during every
lesson. The reason for this blending is for educators and pupils to experience curriculum in a manner that it varied in content and method of delivery. By setting up the educative space that is conducive for single, double, triad and large group formations is of importance because these formations can cater toward a balance of independent and whole group working styles and preferences.

The importance of blending is to for educators to recognition that regardless of the integrated lessons that are planned what is of importance is that current educators alters the preference for a slow and controlled stream of information and acknowledge that everywhere outside of educative settings, a pupil receives information in a rapid multisensory way. A recognition that we exist in a time of digital bombardment is key. Within Ian Juke’s book entitled: Literacy is Not Enough: 21st Century Fluency for the Digital Age the research upon the digital learner deals with a notion that experiences a pupil has outside the educative setting inexplicably alters the learning style and elected mode of receiving information. Digital learners prefer processing pictures, color sound and video before text. This is opposite of traditional educators who prefer to present text first. Traditionally, primary information was always provided by text. Currently the opposite is commonplace within the digital spectrum. One study supports the importance of visual images upon the digital learner (Juke, I., 2010). There was a ninety percent recall of twenty-five hundred pictures after only viewing them for ten seconds seventy-two hours later. In contrast, without the aid of photos, ten percent of information will be retained after seventy-two hours. When images are added, the digital generation will remember sixty-five percent seventy-two hours later. The words complement the pictures. That is what was retained, not the multitude of text letters. Similarly within the
book, Juke posits (Juke, I., 2010) while reading digital learners brains work in an F pattern. The research demonstrates that students only read the upper left side of the page and will rarely read the bottom right side of the page due to the digital bombardment. (Juke, I., 2010). This examination reinforces why an educator could strive to ensure that text materials are designed to take into account a difference in text processing (For example: the F pattern in reading) that differs than the text pattern of multiple words without visuals. Being abreast of varied forms of cognitive and educational research can assist an educator with new tools and strategies to blend into daily deliverance of the curricula.

The forms of multiple intelligence, digital learners, the importance is that despite the multitude of criticism in trying to classify and identify only twelve forms of intelligences the benefit it is that as an educator creating an educative setting that balanced between these intelligences and modalities can only be positive versus exploitive. The importance behind the letter ‘B’ of blending is for the educator to observer and allocate for the students to blend their own lessons in a constructed way. As an educator by varying the mode of delivering curricula in unexpected and unpredictable, ways the probability of maintaining interest is more likely. As well as an educator the role modeling of differing modalities can role model that learning can be expressed in a multitude of ways. By delivering curricula in a blended way, the expectation for pupils to experiment in new forms of self-expression is favorable.

C= Curricula

The letter ‘C’ refers to the curricula within A Blended Curricula Deliverance Program. Imparting curricula to a pupil populace is a requirement for an educator.
Educator discretion is used to select the method for delivering curricula. Currently, the Ministries of Education in Ontario have curriculum documents that are differentiated in accordance to subject areas. A potential consequence is that some educators may view the curricula in fragmented sections and thus instruction of each subject area needs to be delivered separately or independently from one another. Separate versus holistic. When examining the multitude of learning outcomes that are contained within each subject area, it is understandable why an educator may become confounded as to when they can cover these expectations in a yearly teaching cycle. An answer resides within models of curriculum integration. As an educator uses a form of curriculum integration, the ability to connect and expand multiple subject curricula expectations simultaneously is helpful in perceiving and teaching curricula in a holistic manner.

Based upon the research from chapter two’s literature review the three models of curriculum of integration will be presented in preferential order. This preferential order was created based upon the level of educator directed involvement and in relation to Lev Vgotsky’s Gradual Release of Responsibility theory. The preferential order for implementation is as follows: the theme-based model of integration, the interdisciplinary model of integration and lastly the problem-based model of integration. An exploration of each model is imperative.

**Theme-Based Model of Integrated Curriculum**

Implementing a theme-based model of curriculum integration towards the beginning of the educative year is beneficial for three reasons. First, an educator selects the theme independently of the pupils by examining the curriculum documents. Similarly, the teacher can implement the theme in a discipline-specific manner. This one-discipline
manner refers to the theme encompassing one particular subject discipline versus integrating all discipline. The level of curriculum blending is done on one level of subject specificity. This fact is of importance because the theme is interwoven in an explicit manner for the students to make connects too. Second, the planning involved in a theme-based model of curriculum integration can involve just one particular educator and their class only. The ability to select and implement theme as an educator means that the pupils look to the educator for directives, involvement and support. The theme was conceptualized and implemented by the educator and pupils are encouraged to participate within the parameters. Third, due to the high level of educator involvement and support the pupil can see the investment an educator has in their learning. This level of educator direction, guidance and role modeling can be done at the initial phases of a school year because it showcases the support of the educator. The instruction is done in an explicit manner and theme connections are outlined. The educator can explain the ‘how and why’ of a theme and subsequently a pupil can become familiar with curriculum expectations.

After a theme-based model of curriculum integration was used within an educative setting it is beneficial to implement an interdisciplinary model.

**Interdisciplinary Model of Curriculum Integration**

The second model for curriculum integration is an interdisciplinary-model. In the interdisciplinary model, schools group subjects into blocks of time, assign a given number of students to a team of teachers, and expect the teachers to deliver an interdisciplinary or integrated curriculum (Barab, S. A., & Landa, A., 1997). A benefit of an interdisciplinary model emerges because the implementation should precede the theme-based model for the following three reasons. First, an educator has to collaborate
with several colleagues to decide upon the topic, curricula expectations, format and
timetabling for the unit. This opportunity for dialogue fosters a shared responsibility in
delivering the curricula. Second, the educator can benefit from instructing new pupils in a
specified topic. Therefore praxis is open for analysis, just as the methods for instruction,
can be examined from pupils in another class setting. Similarly, the pupil is given an
opportunity to see levels of curriculum integration interwoven into varied subject areas.
The benefit is that the topic is reiterated in a constant manner by being presented by
differing educators, possibly in different classrooms. Third, within this model the pupils
are expected to act with more independence as they are integrated with other students and
the expectation for personalizing the integration of curriculum areas is a factor. Third,
according to the Gradual Release of Responsibility theory the educator is sharing the

Likewise the pupils are being exposed to varied methods of approaches, guidance
and directives from a different educator versus their primary source. The responsibility of
explicit support is becoming more implicit as the onus is given to the pupil to connect the
integration of subject levels. Once the educator and pupil become familiar with two
aforementioned models of curriculum integration, the problem-based model is
recommended.

Problem-Based Model of Integrated Curriculum

It is recommended that a problem-based model of integration is implemented after
solid foundation for understanding curriculum integration is achieved. The reasoning
behind this suggestion is because the totality of this model stems from the students. From
the conception of the problem, the defining of learning outcomes, parameters, integrating
curriculum areas, the student populace defines assessment and culminating activity. There are three benefits from implementation of this model of curriculum integration. First, the problem stems from interests of the student populace that could not have been predetermined from simply examining the curriculum documents. Having the pupils decide about the whole level of curriculum integration is appropriate. At this point in the learning cycle the pupil populace will be familiar with the respective roles for group work. Similarly, a myriad of curriculum has been explored within the educative setting and this familiarity may aid in integrating expectations more conveniently. Second, the benefit is that the various subject disciplines lend their support to the problem that is at the core. This approach is holistic for the problem is the umbrella concept and educator and pupil use subject specific learning outcomes to clarify and solve the problem. The problem-based model involves no division into subject specificity thus subject learning outcomes are applied in terms of a whole processing. Since problem-based model is all encompassing the pupil is encouraged to blend as many curricula areas and resources as possible. Third, the role of the educator is to be receptive to the dialectic conversations that are transpiring within the educative setting. Asking the pupils to reflect and decide upon a problem collective that they would like to address demonstrates appreciation and consideration for the student perspective. With the Gradual Release of Responsibility theory, the educator is shifting the responsibility unto the pupils in all facets of the integrated unit. The role of the educator is to facilitate, observe and assist the students as they solve the problem is ideal. As noted by Pearson and Gallagher, “The critical stage of the model is the ‘guided practice, ‘the stage in which the teacher gradually releases task responsibility to the students.” As such, these lessons eventually fade away as students
become gradually more comfortable with the learning and are able to work without the necessary guidance of the teacher (Pearson & Gallagher, p. 35, 1983). A benefit is that the dependency upon the educator is minimized as the pupils look to themselves and one another to remedy the problem. The Dots in Blue Water project provides a great example of a problem-based model of curriculum integration in an educative setting. Dots in Blue Water is a project that stemmed from an earth science class. The educator was using the hurricane that hit Haiti in 2008 as an illustration for vegetation. As the educator was lecturing about the hurricane in Haiti, a pupil responded with this question: "We do all these science labs to learn stuff. Why can't we do a lab and help these people figure out how to purify their water?" The teacher was responsive to the pupil’s question just as the principles of A Blended Curricula Deliverance Program requires an awareness for comments and concerns emerging from the pupil populace. As a result of this question, the educator responded by setting aside every Friday class period to actuate the idea of providing clean water for the Haitians. Students were organized into different teams including research, development, marketing, and fundraising – and got to work. The pupils raised money and went to Haiti to install the water purifiers (Baer, 2009). This example of problem-based learning showcases how pupils can use the time within an educative setting to apply curricula expectations to address real-world issues.

**Implications of the Models of Curriculum Integration**

Just as the curriculum is viewed as separate documents although the three models of curriculum integration was presented in a specific order it is necessary to state that all forms of curriculum models should be placed within a continuum. This continuum implies that an educator should decide upon when and what form of model of integration
to be implemented based upon the ability and interest of the pupil populace. From the exploration of three models of curriculum integration and the association with the Gradual Release of Responsibility, the unifying concept is that each model provides a variation upon a continuum. The variation pertains to educator involvement, curricula integration and student responsibility. This continuum implies that an educator should decide upon when and what form of model for curriculum integration that is to be implemented based upon the ability and interest of the pupil populace. What is of importance is the application of curriculum integration as a strategy to apply a multitude of curricula in a holistic application.

**D= Deliverance**

Within A Blended Curricula Deliverance Program the ‘D’ implies a form of Deliverance that an educator selects to govern praxis. The form of deliverance is an essential component because within the previous sections: Awareness, Blended, Curricula specify preparation for facets of the instructional aspect within an educative setting. The deliverance component is how an educator decides to integrate and apply the founding principles of each section into their pedagogical praxis. In the ‘Awareness’ stage the recommendation for contemplation about one’s own learning preference and cognitive science research in relation to constructivism. ‘Blended’ refers to the ways in which an educator examines the curriculum documents in a holistic manner versus fragmented pieces. In addition, how the educator decides to organize the educative space so that the opportunity for varied group formations is available. ‘Curricula’ stipulates that a way to deliver the curriculum in a holistic manner is through integrated models of curriculum. The recommendation is to first implement a theme-based model,
interdisciplinary model and lastly a problem-based model. ‘Deliverance’ relates to the way in which an educator ties all of this information into their pedagogical viewpoint. The preparation for the instructional aspect is the first component of the magnitude of an educative setting. The deliverance stage means that as educator and pupils interact the delivering of curricula is a shared endeavor. If the educator is receptive to the contribution of the pupils, then selecting and delivering the curricula should aid in illuminating and affirming the pupils. Affirmation stems from intentionally creating learning opportunities whereby self-exploration is fostered. A focus upon self-development and observation of oneself in relation to others enhances the educational experience.

**Application of A Blended Curricula Deliverance Program**

From defining the meaning of A Blended Curricula Deliverance Program, the suggestion is for educators to aim to incorporate active student lead problem solving activities on daily basis. Defining ‘active student lead problem solving activities’ means allowing the student to cater to their cognitive neuronal connections through ‘experience’ with the curricula. The way an educator can provide experience for the curricula is to intentionally place problem solving in a ‘real world context’. By placing the problem solving in a real world context, the intention is to capture the pupil’s interest by focusing upon something identifiable or meaningful within their existing experiences and subsequently cognitive schemata. There is a need to provide pupils with an internal model of problem solving that will equip them with a methodology to solve problems outside the educative setting. The work by Ian Jukes relating to a twenty-first digital
citizen has developed solution fluency (Juke, 2010). Solution fluency is a step-by-step process that assists an educator in the process of placing problem solving within a real world context. The intention is to expose the pupil’s to multiple opportunities for problem solving so that the stages are an engrained strategy of how to problem solve. The goal is to have the pupil be able to generalize and apply problem-solving skills learned within the educative setting to every facet of their lives. Ian Juke’s Solution Fluency Model was designed upon project requirements that pupils require within the workforce. Studies state that an average a person may experience ten to seventeen different jobs by the age of thirty-five (Vilorio, D. 2011). This is of importance because irrespective of the type of job a pupil may have the ability to problem solve is required and definite. Problem-solving skills involve qualifying the problem, collaboration, critical and creative ways to remedy the problem are examples of proficiencies that are utilized when solving a problem. These skill sets are essential for educators because they provide an incentive for educators to consider them all employment deals with a form of problem solving and dealing with information in some capacity. Since it is nonsensical believe that the Ministries of Education’s curricula learning outcomes is the totality of what pupils ‘need to know’ the benefit resides in the process of equipping students with a way to navigate within a field of information bombardment. A way to model how to navigate is by repeated learning opportunities of problem solving using the six D process outlined by Ian Jukes. The six D’s of Ian Juke’s problem solving model coincide with the essence of A Blended Curricula Deliverance Program because the time within an educative setting is focused upon cognitive development by providing opportunities for the pupils to showcase their interpretation and applicability of curricula through the context of
addressing real world problems and issues. The relevancy of this framework is that time within the educative setting can be used to readily prepare pupils for summative assessments expected by the Ministry of Education whilst more importantly providing a formulaic internalized model of problem solving. The intention is for the students to internalize these experiences. Since the student requirement is to be active participants in creating, defining, negotiating the problem being studied the motivation for learning is going to increase.

According to Ian Jukes the definition of solution fluency there are six components that are classified as: define, discover, dream, design, deliver and debrief (Juke, 2010). It is beneficial to explore each of these ‘d designations’ and the applicability of principles of A Blended Curricula Deliverance Program in how they coincide and enhance this framework.

Awareness is the relevancy because the extension is that the pupils should be directing the problems that are of interest. As an educator a responsibility is having awareness and openness to co-construct and thus define a particular problem that is relevant for the pupil populace. A way that this can be achieved is through observation (awareness) and dialogue. Awareness of what experiences that a pupil populace encounter in a particular educative setting can help the educator select a problem. Once relevant problem has been identified the educator should dialogue with the pupils to gather their input in deciding upon the problem of interest. Once that educator presents a specific problem within of real world context, the pupil applies the model of solution fluency.
The example of ‘selecting a classroom pet’ will be used to illustrate the application of A Blended Curricula Deliverance Program and the solution fluency model. The question from the educator could be: “Should we get a classroom pet?” The open-ended aspect of this question shows an awareness of consideration for each pupil’s opinion about this topic. Before responses are gathered and presented in a public forum for large group discussion, each student is given an opportunity to contemplate and become aware of their own opinion regarding this collective decision.

**Solution Fluency: Stage One: Define**

First the pupil will define the task or problem correctly before they start their work. Incorporating personal opinions of the problem can result in a force choice of either a yes, maybe or no response (Baron, H., 1996). For any problem an educator frames the issues is not about classifying pupil response as either ‘correct or wrong’ but celebrating a pupil’s ability to articulate, support and showcase their viewpoint.

**Solution Fluency: Stage Two: Discover**

The second stage of solution fluency is to discover. Discover means that the student focuses upon what has happened in the past, a historical context to consider the problem, and subsequently arrive at their own opinion (Juke, 2010). The challenge within the discover stage is relevant as it evolves into pupils seeking an awareness of previous examples of a similar situation. The challenge is for the pupil to move beyond personal opinion and consider the opinions and actions of others problem solving in similar experiences. Although humans are cognitively wired to seek out data that support their own existing schemata (to avoid cognitive dissonance) it is all too easy, common practice
and erroneous to only find information and research that justifies one’s own viewpoint. Herein lies an opportunity for pupil and educator alike, to intentionally examine differing viewpoints with openness and respect. Considering the example of the pet in the classroom, the pupil can gather information pertaining to pet precedents at the educative setting, administrative issues, and safety concerns for the pet, pupils in the classroom, other pupils and staff within the educative setting. The pupil is required to move beyond oneself and apply awareness and consideration for all who reside within that educative setting.

**Solution Fluency: Stage Three: Dream**

The third stage of the solution fluency model is dream. Dream means wide-open visualization. A way to be receptive to one’s own visualization is to apply an awareness of observation of the breath. By focusing upon the breathing cycle a calm stillness can lend to reception of images and visualizations (Mackinlay, J. D., 1999). This is where creativity can happen. Within this stage there are no limits, expectation or pressure placed upon the pupil. A pupil is encouraged to go within, visualize and simply observe what manifests as they meditate via the breath. The visualization process can lend to creative problem solving by innovating new ways to deal with a problem. Playfulness is fostered at this level because each image, word, concept and sensory manifestation is utterly unique to each pupil. (Rogers, C. & Sawyers, J., 1988). Applying the classroom pet example the pupil can consider any type of pet they can imagine from an extinct animal, an endangered species such as a komodo dragon or a goldfish. The possibilities and choices are limitless. The freedom from this dream and play may be transformed as the pupil flow into the design stage.
Solution Fluency: Stage Four: Design

The design stage involves the pupil map out the process or plan/blueprint to keep on track to deliver the solution that was defined within the dream stage. The applicability of this phase is that each pupil will be blending curricula to support their personalized plan. A definitive aspect pertaining to the ‘B’ and ‘C’ of A Blended Curricula Deliverance Program is supported by this very act. Depending upon the problem-solving context and situation a pupil is blending multiple curriculum subject areas at varying depths in an integrating way. Using the classroom pet example the student must integrate multiple subjects to design and support their viewpoint. The application of science (life cycle, biology and food requirements for the pet), mathematics (potential expenses procured), visual arts (using mixed media to create posters and advertising for raising funds to acquire the pet), health (is the classroom environment hazardous to the health of the pet and vice versa are the physical attributes of the pet problematic for any members in the classroom?), physical education (what does the pet require in terms of movement to maintain optimal health?), social studies (where, how and when to locate and ascertain the pet) and language arts (proposal writing to the administration seeking support for the pet) are some of the subject areas that could be integrated to prepare for a culminating activity in the next stage.

Solution Fluency: Stage Five: Deliver

The fifth stage of solution fluency represents deliver. In the deliver stage the pupil is expected to apply knowledge in the form of a product. The product will be illustrated in the format of a presentation (Juke, 2010). A challenge is for the pupil to move from the abstract (define, dream and design stage) into the concrete (deliver stage). The deliver
stage is replication of the Deliverance principle of A Blended Curricula Deliverance Program because the pupil is given freedom to select any method, form and medium to present their product. By placing the onus unto the pupil the pressure to conform to a prefabricated mould is eliminated. The pupil is challenged to create their own form of deliverance that will highlight their learning process. The intention behind this distinction is to create circumstances that aim to witness each pupil’s preferred modality and intelligences. Considering the problem of the classroom pet the pupil could make a three-dimensional model of classroom pet, a power-point presentation, a graphic novel or diorama involving the pet, are a few examples of how a product can be presented. The process of articulating, presenting and becoming comfortable with one’s own work is a necessity in all aspects of life. An additional benefit from this presentational process is that pupils are required to be receptive and rapidly respond to comments, suggestions and questions from peers and educator. This questioning period is paramount because the pupil is required to reiterate learning by responding to unpredicted stimuli immediately. After the presentation the learning continues during the debrief phase.

Solution Fluency: Stage Six: Debrief

The learning process continues as a pupil reflects and evaluate upon their work critically. Gathering input from peer and educator assessments, the ownership resides with the pupil to solidify their learning by deciding what worked and how to improve. A benefit is that self-examination, awareness and assessment is ongoing, open-ended and not closed. The learning never stops and cannot be quantified in terms of a letter grade or captured in a brief few moments. According to Helding (2009), "Standard IQ tests measure knowledge gained at a particular moment in time, they can only provide a
freeze-frame view of crystallized knowledge. They cannot assess or predict a person’s ability to learn, to assimilate new information, or to solve new problems." After all, one intention of education is to encourage a propensity for continued learning.

This hypothetical example of the A Blended Curricula Deliverance Program in a classroom showcases and blends with the founding principle of being a radiating synthesis for the pupils. As an educator you are radiating a consideration for the pupils as their voice and opinion is heard, so irrespective of whether or not a class pet was selected, what is of importance is that each voice within the classroom was heard. The synthesis component from this pet example is to aim to transition the student from self-centered perspective to receptiveness towards other pupil viewpoints. The way to accomplish this is by intentionally creating scaffolding activities that allow for peer-assessment and self-assessment to occur. The benefit is that versus the ‘collect and correct model’ the student is involved from the conception to conclusion of the assessment process.

The benefit is that by becoming aware of other pupils work they naturally will engage in social comparison theory in a positive way of further synthesizing and reiterating their learning in new ways as they have to respond to peer and educator questions and comments. The benefit is that they are not simply handing in a piece of work and the educator is passively assessing and hoarding the student knowledge and wisdom, it is thrown out into the collective consciousness of the educative setting to be celebrated.
Implications for A Blended Curricula Deliverance Program and Solution Fluency

Multiple ‘learning outcomes’ are inadvertently being addressed because problem solving involves an application of the totality of oneself. This totality means that the human brain/body does not deal with any sensory input in an isolated way. The coupling of A Blended Curricula Deliverance Program and the stages of solution fluency, result in an acknowledgement that the mind, body and consciousness are active participants (qualifying, interpreting and altering) within all existing moments. An implication is for an educator to provide learning opportunities that caters to this acknowledgement. By placing all curricula through a lens of real world problem solving the triad will likely be placated.

The first three stages of the Solution Fluency Model for problem solving: defining, dream, design (Juke, 2010) engage awareness of one’s own cognitive schemata and physiological reaction to the problem at hand. Once the pupil has contemplated the problem, the need to blend curricula expectations to create a method of problem solving occurs. The deliver stage caters to the application of all sensory input and bodily manifestations of the whole senses to create showcase ones own thoughts and meanings. This is the point whereby a pupil’s intention of the product is free to collide and interact with others. Debrief is the stage where by the consciousness is called into reflection and contemplation as the pupil is called to be accountable by considering infinite implications of their work upon everything outside of themselves. This process supersedes input-output, action-reaction as the educative setting, peer pupils and educator act as a springboard by acting like a mirror and reflecting everything a pupil does back unto
themselves. This process is framed within an abundance of self-discovery and awareness. The learning process is in a state of constant flux as the principles of A Blended Curricula Deliverance Program and Solution Fluency Model is applied within any educational situation.

**Conclusions of A Blended Curricula Deliverance Program**

The educative landscape requires an educator to deliver curricula in accordance to the Ministries of Education learning outcomes. The question of how to deliver curricula is a qualifying aspect of being an educator. The need to utilize the time within any educative setting to instruct about a broader responsibility than a simple dissemination of curricula is needed. A broader responsibility means that curricula can be delivered in a manner that fosters self-exploration, appreciation for others and global citizenship.

Educators deal with the field of knowledge and since it is nonsensical to assume that the curricula learning outcomes the totality of what a pupil ‘needs to know’. However the role of an educator is to role model how to approach a problem and in the process derive new knowledge. And that is why the application of A Blended Curricula Deliverance Program is of importance. The principles within A Blended Curricula Deliverance Program demand a reciprocal shaping between educator and pupil. This reciprocal shaping transpires as the educator and pupil engage in constructivist-oriented activities.

Upon integrating the principles of A Blended Curricula Deliverance Program an educator is equipped with strategies that can be applied to all facets of the educational process. In the application of A Blended Curricula Deliverance Program during the learning process, a pupil is encouraged to envision and create whatever they desire with the end product in
mind. The importance of this stage is that by having an awareness of oneself, via the breath, the vision they imagine has to be actualized into an end product of some kind. The benefit of this process is that it is not linear and what one visions or pictures as an end product is not set by rather a fluid circular process that involves on-going modifications and adjustments to all stages as the process evolves. Essentially, the onus for learning is placed upon the pupil as the educator provides guidance to help the student use curricula to enrich personally defined and relevant problems.
Chapter Four: Imperative Integrated Curriculum

Ontario school districts have a multitude of expectations and organizational elements that encourage a specialization pedagogical stance. Specifically, educators are encouraged to become knowledgeable within the realm of one or two subject areas as content knowledge specialists. Many educators stay within the realm of subject departments. The additional pressure of the transparent documentation for accountability only solidifies detachment. Acknowledging this discontent has resulted in the production of educational literature that encourages school districts to evaluate the current school systems. Educators crave change that results in reform to curricula expectations that overload both themselves and pupils alike. A foundation such as this has lead to a platform whereby integrated curriculum models are being supported. The basis for this thesis is to explore and evaluate the consequences integrated curriculum has within an educative setting.

Within chapter one, an overview of why curriculum integration is a valued thesis topic was explored. A historical overview, definitions and research from cognitive neuroscience and psychology further reinforce the benefits of integrated curriculum. Chapter two contains the literature review and a necessary review of three models of curriculum integration. The three models were interdisciplinary, theme-based and problem-based model. Common elements from these models were stated as well as necessary factors that are required for any integrated model to flourish. Based upon the information gathered throughout this thesis, the third chapter contains a new educative term that I created to encompass all of the factors in implementing curriculum integration. This educative term is called A Blended Curricula Deliverance Program. The
principles are explored in depth due to the connection to educational praxis. The intention is to adorn educators with an approach towards integrated curriculum that is holistic. An example of this educative term, A Blended Curricula Deliverance Program, is interwoven with a model of solution fluency to showcase the benefits of using this method. The fourth chapter contains benefits and limitations of curriculum integration within educative environments. A vital component is how the application of A Blended Curricula Deliverance Program is to encourage mindfulness and contemplation for both the educator and pupil. The possibility of animating curriculum as a way to view curricula expectations as a tool to improve and illuminate ones life is prodigious. It is necessary to reiterate the important discoveries within each chapter.

It is important to understand that curriculum integration is an idea that has a strong historical background. Disciplines were created in an attempt to organize the world around them; sometimes this was motivated by political means (Beane 1991). Amidst chapter one of this thesis, a philosophical view supporting integrated curricula is the notion that students have increased knowledge when internalizing and relating to the information in a self-context. Simply relate the curricula expectations to oneself and observe the relevancy for the material. Pupils direct experience is crucial in purposeful learning. Integrating curriculum models is a method that shifts from a traditional structure towards a multitude of ways to derive truth. Many differing possibilities emerge and the curriculum becomes personalized in a post-modern attitude. Focusing upon the relevancy for curriculum integration within the Ontario education system is a valuable. It is useful to examine the reasoning for schools to integrate curriculum.
Educators continuously search for opportunities to assist pupils integrate multitude of life experiences and the knowledge they gather from departmentalized curricula. The current school structure allows for a disseminating of information via separate subject areas. This separation leaves the information as subject specific and independent of other areas and that do not resemble real life circumstances. To address this concern, holistic and integrated curriculum models have been proposed and implemented by various school systems. A principle ingrained within integrated curricula models is the notion that the blending of projects, subjects and summative tasks result in pupils making connections across subject areas. Subject information then becomes part of the learning cycle rather than fragmented pieces of knowledge. Within the second chapter of this thesis literature and examples of integrated curricula models were explored.

Student experience is an essential component for meaningful learning outcomes to occur. Integrated curriculum is an excellent approach to accomplishing this goal. Yet the current school structure results in pupils catapulting from one subject area to the next resulting in lost relevancy. Progressives were opposed to the "factory-like efficiency" model, on which schools depended. Progressives believed that school learning was so unlike the real world that it had little or no meaning to the average child, (Ellis & Bernard, 2006).

From the literature reviewed within chapter two, two compelling arguments emerged favoring integrated curricula. First, there are too many curriculum expectations outlined to be explored within a traditional structure of a subject period. Second, the majority of subject material is taught in isolation of other related information. The sole
responsibility lies within a pupil being able to independently make connections with no guidance or support. The nature of interdisciplinary curriculum strives to present curriculum themes, topics and projects that are student-based and the curriculum expectations support their work. In addition, students are given the task to see how their own work stems across a curricular span. This approach is a stark contrast to the lecture based, didactic nature that ignores the capabilities and needs of our post-modern pupils.

The cognitive neuroscience information that is outlined in chapter two reiterates the importance for educators to allow for personalization and active manipulation of curriculum to be expressed personally by each pupil. By co-creating summative tasks, the ownership is placed upon the learner to showcase their knowledge by various intelligences and modalities of their choice. By integrating curriculum subjects, both educator and pupil discover questions and meanings that the pupil creates rather than the regurgitated ideals of the educator alone. The development of creative teaching strategies and ways for student expression is part of the process of integrated curriculum models.

Integrated curriculum units are diversified because the deliverance of these units dependent upon three variables: context, educator’s personal pedagogical disposition and educational institution whereby the integrated curriculum occurs. It is beneficial to explore each variable in further detail. First, defining the context in which curriculum integration is being applied is essential. Within any specific curricular subject there is opportunity to integrate multiple expectations from that one subject domain versus integration among other subject disciplines. Second, the “educator’s personal pedagogical disposition” meaning their willingness to engage in this challenging and exhilarating endeavor, is of importance. The decision to deliver curriculum, in an integrated manner,
is a personal choice as the Ministries of Ontario have yet to mandate a constructivist-oriented approach as the preferred form of instruction. Thirdly, the educational institution by which integrated curriculum is being utilized. Currently, within many Ontario elementary schools integrated units are organized according to thematic units. A sort of “wholeness” is being presented for the students to make connections of multiple curriculum areas and see the thematic unit from a macro-level. In contrast, at a university level, integrated curriculum is often presented within the scope of dissection, at a microscopic level.

Within chapter two, three models of integrated curriculum were explored. According to Loepp (2004) one model of curriculum integration is identified as ‘the interdisciplinary model.’ In this case, ‘Schools group traditional subjects into blocks of time, assign a given number of students to a team of teachers, and expect the teachers to deliver an interdisciplinary or integrated curriculum’ (Loepp, 2004). An advantage of this model is that the educator and pupil simultaneously experience collaboration, the educator communicates with colleagues about curricula expectations as pupils discuss themes and work on project goals together. This interdisciplinary model mimics real life experiences. A challenge inherent to this model is the possibility of undermining the importance of the content specific knowledge. In many problem-solving situations the ability to delve within a topic area is necessary.

A second model described by Loepp (2004) is the ‘problem-based model’. This model is based upon the founding principle that a ‘local problem’ is at the center of the planning and various disciplines focus collectively in solving this particular problem. According to Chard (1998), planning problem-based model involved three steps: First,
educator and student populace select a topic of study based on student interests, curriculum standards, and local resources. Second, the educator finds out what the students already know and helps them generate questions to explore. The educator also provides resources for students and opportunities to work in the field. Third, students share their work with others in a culminating activity. Students display the results of their exploration and review and evaluate the project (Chard, 1998). An advantage of this model is having the students who identify themselves as inexplicably connected to the environment. An impediment of this approach is the difficulty in creating a problem that addresses the curriculum expectations in a multifaceted manner.

The third model of integrated curriculum is known as the ‘theme-based model’. Within this model, curricular subjects are taught in varied blocks but the linking resides in a theme or themes interwoven across the whole curriculum. Often three or more subject areas are involved in the study, and the unit ends with an integrated culminating activity. A theme-based unit involving the whole school may be independent of the regular school schedule (Relan, A., & Kimpston, R., 1993). A benefit of this model is that the pupils can select a problem that has global significance. The aim is for the pupils to see how curricular expectations are necessary to explore and solve problems within broad contexts. An obstacle with this model is that the problem has to be founded in curriculum expectations and not simply a clustering of expectations posing under the guise of a problem based model.

Learning is a complex process impacted by many factors, including the feelings and emotions of the learner. Within the Ontario Ministry of Education, Capacity Building Series entitled: Integrated Learning in the Classroom, the following exert
addresses this fact:

“Particularly, in young children, feelings and emotions affect the learning experience in a positive or negative way. An educator’s relationship with a child can play a huge role in a successful learning experience. Educators are seeing these relationships strengthened as the use documentation strategies to continue to grow in an understanding of their students’ interests, learning and developmental needs. As educators step back to listen to how a student is thinking and allow the child to take the lead in the learning, students become partners in the learning process. Many educators are identifying student led inquiry as a vehicle to strengthen this learning process” (Olsen, J., 2008).

As educator and pupil engage in a symbiotic relationship, a need for documentation emerges. The issue of varied and diverse assessment techniques links to the fourth implication of integrated curriculum models.

Based upon the literary discoveries within the second chapter, common elements materialize. The following elements provide a foundation for most integrated curriculum models. First, the integrated curriculum unit tends to be theme based upon a popular issue. The determination of this theme is negotiated between the educator and the student populace. Second, subjects seem to integrate easily as pupils complete various stages of the project within a group. Third, instructional techniques such as differentiated instruction, constructivism and cooperative learning are often components of an integrated curriculum, (Montgomery, 1999). Fourth, educators and pupils are given opportunities to reflect and grow regarding their own praxis as they experience varied viewpoints and bear witness to others learning processes. Fifth, educators need to engage
in on-going professional developmental opportunities where they can engage in peer
dialogue and observe varied educative settings to witness new integrated models in
practice. Lastly, irrespective of the type of integrated curricula model that is infused
within the educative setting, it is essential for the administration to lend support. Support
can vary from time to plan, collegial meetings, patience for the expression of new forms
of learning styles and even financial support.

Understanding the current educational climate is essential as educators. Acquiring
an explicit awareness or knowledge of the educational shift towards integrative
curriculum is paramount. An educator can engage in a constructivist-oriented praxis to
assist in readying pupils for navigating within all facets of life as contemplative learners.
Within chapter three of this thesis, an exploration of an educative term I created to aid
educators with the challenges of delivering an integrated curricula program is addressed.
This educative term is A Blended Curricula Deliverance Program (ABCDP). The
principles founding this term result in an animation of curriculum. Ensuring that the
principles of a blended curricula deliverance program are infused into ones educative
practice, is one method of assurance that pupils will burgeon.

As within chapter three, it is necessary to review each aspect of this educative term.
A represents Awareness (an educator is aware of one’s breathing cycle in relation to
being a contemplative practitioner. This awareness can result in an ability to recognize
the multitude modalities of intelligences in relation to cognitive science). Stiving to be
aware of ones own learning style and preferred method of teaching will allow for the
educator to ensure the educative setting is designed to address other styles. B
emblematizes Blended (how an educator can set up the educative setting: the space
whereby pupils frequently reside, for instruction to facilitate the development of learning styles with space for varied group formations). As with other aspects of the educative process, the influence of the physical environment recalibrates those who reside within. The importance behind the letter ‘B’ of blending is for the educator to observer and allocate for the students to blend their own lessons in a constructed way. As an educator by varying the mode of delivering curricula in unexpected and unpredictable, ways the probability of maintaining interest is more likely. As well as an educator the role modeling of differing modalities can role model that learning can be expressed in a multitude of ways. By delivering curricula in a blended way, the expectation for pupils to experiment in new forms of self-expression is favorable. C signifies Curricula (involves exploring how an educator can aim to integrate curriculum through the application of three models of integration: theme-based model, interdisciplinary model and problem-based model. The application of the models can be implemented according to the level of teacher direction, depth of curriculum blending and integration and student responsibility. The recommendation is for educators to use all three models at varying points. The decision to use each models stems from the gradual release of responsibility from the educator unto the students. As educator directed activities decrease the pupil populace gains greater momentum in sustaining, leading and participating in curricular activities. Integrating curriculum through the application of model for curriculum integration typifies a need for holistic education. D means Deliverance (the approach of how an educator can decipher ways to deliver curricula in a manner that is holistic in nature by infusing the concepts acquired within each aspect of A Blended Curricula Deliverance Program). The capability of the student populace is endless while encouraged to
showcase their learning involving technology as a means to do so.

The educative term of A Blended Curricula Deliverance Program is placed within a classroom context as it is interwoven with the work by Ian Jukes relating to a twenty-first digital citizen has developed solution fluency (Juke, 2010). The reason is because there is a need to provide pupils with an internal model of problem solving that will equip them with a methodology to solve problems outside the educative setting. The six D’s of Ian Juke’s problem solving model coincide with the essence of A Blended Curricula Deliverance Program because the time within an educative setting is focused upon cognitive development by providing opportunities for the pupils to showcase their interpretation and applicability of curricula through the context of addressing real world problems and issues.

According to Ian Jukes the definition of solution fluency there are six components that are classified as: define, discover, dream, design, deliver and debrief (Juke, 2010). It is relevant to explore how the principles of A Blended Curricula Deliverance program meld with each component of the solution fluency model. As an educator is essential to possess an awareness of what problem the pupil has defined as the focal point of their work. The goal is to support the pupil’s ability to articulate their viewpoint. The Second ‘D’ is discover which resides under the notion of awareness of other work and issues surrounding any particular topic. The third ‘D’ of dream coincides with blending because there are no limits pertaining to the multitude of ways in which a pupil can illustrate their learning in any given educative setting. The fourth ‘D’ which is design matches the curricula aspect because the ownership resides within the pupil selecting curriculum expectations that are required for their project. The fifth ‘D’ deliver
is exactly the same as the deliverance within ABCDP. The deliverance stage is when a pupil showcases their learning via any modality that they select. This is solution fluency model is useful for the sixth ‘D’ debrief. The importance is that the pupil is required to respond to questions, deal with peer assessment and engage in self-reflection. Also, when students help one another learn, they create scaffolding for one another’s efforts, and they may co-construct more sophisticated ideas and strategies than any single group member might be able to construct alone (Goodsell et al., 1992). The process of contemplation of one’s own work and learning process is why the principles of A Blended Curricula Deliverance Program and the Solution Fluency model amalgamate seamlessly. Equipping pupils with skill sets that generalize into daily problem solving is invaluable.

The relevance of A Blended Curricula Deliverance Program as an educative term is because the need for education that is holistic in nature. The notion of holistic refers to an educational program that caters to all aspects of being human. A cognitive focus as the curricula is selected to increase the interconnectivity of schemata, awareness of a physicality of being is achieved through observation of one’s breathing cycle and appreciation for oneself and peers manifest in learning opportunities that address community environmental issues. Acquiring knowledge is a passive yet when a pupil has experience with curricula, that the animation of curriculum transpires. Educator and pupil populace interact in a reciprocal manner and as this mutual shaping occurs the educational process evolves. The pedagogical disposition of an educator provides the foundation for all that occurs within the educative setting. By having a disposition that is aware of the interconnectivity between cognitive functions in input and physiological outputs of a pupil is beneficial. A benefit stems from acknowledging that each person
within any educative setting brings a unique cognitive skill set, physical attributes and preferred learning modality. This variance supports the principles of A Blended Curricula Deliverance Program as each component pertains to further developing, enhancing and sharing this fact of variance in a supported way.

Deriving from both the literature and research within this thesis there are limitations in integrated curriculum. First, the educational experience of many educators is gravely different because the educator was the dictator of knowledge. Curricula expectations were given in a teacher-directed manner. Therefore it is understandable that educators are apprehensive to assume a co-navigational stance with their pupils in directing the flow of curricula materials. Second, some educators may not be confident in their own knowledge and skill set in varied subjects. If one plans to integrate curricula then it is necessary to become familiar with as many subject areas as possible. This issue is particularly relevant for secondary educators with specific departments. Third, in particular cases the need for content specificity is relevant for problem resolution because generalized information may not always address the issue. Fourth, a critical issue is assessment. Educators are under pressure to have and be able to produce ‘evidence’ of student learning. While engaging in integrated curriculum models student develop higher order thinking skills and a deeper understanding that cannot be encapsulated in a traditional way (for example: a paper and pencil task, quiz or test). Thus the challenge is for both educators and pupils to create new success criteria and rubrics to showcase the enriched learning process. Lastly, imparting curricula to a pupil populace is a requirement for an educator. Educator discretion is used to select the method for delivering curricula. Currently, the Ministries of Education in Ontario have curriculum documents that are
differentiated in accordance to subject areas. A potential consequence is that some educators may view the curricula in fragmented sections and thus instruction of each subject area needs to be delivered separately or independently from one another. Separate versus holistic. When examining the multitude of learning outcomes that are contained within each subject area, it is understandable why an educator may become confounded as to when they can cover these expectations in a yearly teaching cycle. An answer resides within models of curriculum integration. As an educator uses a form of curriculum integration, the ability to connect and expand multiple subject curricula expectations simultaneously is helpful in perceiving and teaching curricula in a holistic manner.

Conclusions

The necessity for the Ontario education system to create an environment that sustains integrated curricula models is paramount. From the research the integrated curriculum approach assists pupils to define, explore and involve curriculum expectations into their own schemata. The social learning theory supports that when pupils can show their abilities, a higher level of self-efficacy is achieved. Cooperative learning allows all ability levels to show higher academic achievement as well as promoting higher self-efficacy (Bandura, 1989). Similarly, as pupils and educators work on a task together the chance for appreciation varied information processing styles and learning abilities transpire. The opportunity for educator collegiality emerges as educators have to intentional plan learning opportunities. Thus integrated curriculum is a valuable innovation that addresses varying factors that emerge in any educative setting.
The information within this thesis proposes that integrated curriculum within educational situations is beneficial. The opportunity for students, educators, support staff, parents and administrators to strive towards a common learning praxis is remarkable. Based upon our physiological responses to stimuli, within any environment, we make neuronal connections to things we experience and know. Neuronal connections can develop, as the totality of an experience has no boundaries and can form organically versus prefabricated, disconnected experiences that lack relevancy. Curriculum expectations that become internalized for a pupil may result in an application of the knowledge into their lives in a meaningful way. A key component of the educative term of A Blended Curricula Deliverance Program is mindfulness. The notion of mindfulness coincides with being present in every moment of ones existence. One way of being mindful is through an observation of ones breath. The observation of the breath can allow people to engage in a constant form of meditation by simply having an awareness of one breath. By maintaining this ‘awareness’ and being “mindful of every moment’ learners can “observe” first hand, what is transpiring, emerging and radiating from oneself without judgment but with awareness. A way of obtaining ‘a mindful state’ is when a learner can strive to quiet the incessant cognitive-physical manifestations and listen to ones essence flow via the breath. Breathing is a fundamental component for human functioning. Without freshly oxygenated blood, most humans can sustain life for very few minutes. (Moore, L. G., June 2001). The following quotation by Joseph Nowicki summarizes the need for integrated curriculum within the educational landscape: “There is a strong push to involve students in their learning, to let them create their own understanding, to encourage critical thinking, and to increase students’ responsibility in
schooling. Integrated curriculum translates this theory into practice”.

**Formularized Perspective**

Being an educator within the twenty-first century is an extraordinary opportunity. On a daily basis, educators deal with an infinite number of variables at any given moment. As a result of this experiential reality, educator response can be compared to a complex piece of binary code. Unlike a computing binary code whereby the results are imputed by a computer programmer to always render the same results: zeros or ones, black or white, (no computer programmer can program an algorithmic program that encapsulates the complexities that reside within a phenomena we call the human brain and being) dependent upon the variables in education at any given moment there are infinite factors that contribute in creating a classroom learning environment that cannot be quantified, coded or readily captured. The impact of integrating a blended curricular deliverance program (ABCDP) is limitless. The limitlessness or magnitude resides in the planned intentionality regarding the following factors: classroom set-up (environmental impact-spaces that cater to multiple intelligences and modalities of learning), brain-based integrated lesson planning that lend to increased neurological functioning via experiences and lastly, holistic in nature because of the mindfulness of the moment. The necessity of abiding by these principal elements are because of the adherence to experiential educative opportunities that render a new way of seeing, touching, hearing and feeling curricula.

To adhere to these principle require educators to strike a cognitive-behavioral balance between the external educative pressures and personal pedagogical schemas. One method for succeeding at this task requires educators to be in a constant state of reflection and contemplation. The reason to engage in a blended curricular deliverance program can
be summed up in one word: gratitude.

The limitless nature of a blended curricula deliverance program (ABCDP) has founding conceptualized principles amalgamating from specific words written by Jean Baudrillard in The Procession of Simulacra. It is imperative to examine the following words to see the connection:

“The real is produced from miniaturization from cell matrices and memory banks, models of control-and it can be reproduced in an indefinite number of times of these. It is no longer needs to be rational, because it is no longer reassures itself against either an ideal or negative instance. It is no longer anything but rationale. In fact, it is no longer really a real because no imaginary envelops it anymore. It is hyperreal, produced from a radiating synthesis of combinatory models in hyperspace without atmosphere.”

There is a triadic correlation aspect between the aforementioned words of Baudrillard, thermodynamics and a blended curricula deliverance program (ABCDP). It is essential to examine a sub-section within the aforementioned quotation:

“It is hyperreal, produced from a radiating synthesis of combinatory models in hyperspace without atmosphere.”

First, I am presupposing that the words: “radiating synthesis” implies “heat” (radiating) and “integrated energy” (synthesis). This reference to “radiating or heat” is of importance because can be connected to the first law of thermodynamics. My definition of the word “heat” can be caused from a friction that results in the ignition of a spark. This spark is exactly the intention of A Blended Curricula Deliverance Program for igniting and sparking movement, friction and rapid firing of a pupil’s neuronal connections. A ‘sparking’ is essential within any educative setting because the correlation
is a fire that cannot be contained, qualified or understood. The symbol of the fire is linked with the first law of thermodynamics. The first law of thermodynamics is called the law of conservation of energy which says that energy cannot be created or destroyed but can only be changed from one form to another (Barrow & Tipler, P., 2004). This law is of relevancy as it highlights that the energy or effort, an educator places into their profession, will be transformed in endless ways. If an educator’s disposition towards their daily practice can be equated with a “radiating warmth” then incorporating principles of A Blended Curricula Deliverance Program (ABCDP) can further assist in accomplishing this task. I believe that this warmth is created by intentionally creating a learning environment whereby the students are at the core. When pupils are placed at the core of all educative experiences this aid in fostering greater self-appreciation. Pupils may see themselves as ‘an ember burning brightly’. When curriculum is presented as a tool to be utilized for celebrating unique (exclusive to each pupil) personality traits addresses the developmental phenomenon of self.

The notion of “being” and “I” are inextricably linked to imply a responsibility or reference to consciousness or an awareness of oneself. This ability to construct and image of ‘oneself’ is often done through the relational experiences with other human beings and the environmental context. I will be examining three theories that support the previous supposition: Zizek’s notion that one must detach from a primary caregiver to define oneself, looking glass-self and contextual conditioning.

According to Slavoj Zizek that a human being begins to differentiate oneself as via detachment from their primary caregiver. At this stage they can readily identify themselves (Zizkek, S. p. 302., 2006). Humans differentiate ‘oneself’ by developing a
sense of self via detachment from their primary caregiver. A separation. Within
An elementary level, which is the focus point for A Blended Curricula Deliverance
Program (ABCDP), this coincides with their cognitive and moral reasoning phase that
develop. (Kohlberg, L. 1963). During this time, an educator’s dispositional warmth
regarding each pupil’s physiological, cognitive and moral development is a necessity. By
having each student honored by being recognized as an integral unique core component
and vital in the collective whole, sets the foundation for a form of collected classroom
consciousness. This collective classroom consciousness fosters a cognitive shift from “I”
to “we”. The pupils continue to construct their own identity throughout their daily
experiences. However, due to the multitude of hours pupils spend within an educative
setting, the opportunity for self-improvement is boundless. The psychological
phenomenon entitled “contextual conditioning” is of relevance. Within the article,
Classical fear conditioning in functional neuroimaging, the terms of contextual
conditioning was defined as the following: Foreground contextual conditioning occurs
when an emotionally salient event (such as a shock or some food) is presented in an
environment (a context) with no discrete cues to predict it. In this case, the context is the
most direct predictor of the salient event and conditioning to the context will be strong.
(Büchel C., & Dolan R.J. p. 10-219–223., 2000). This term is of importance because of
the fact that if an educative space can be co-constructed to be a space whereby the pupils
enter into the physical room and their physiological systems are ‘secure, safe and at ease’
this is optimal for a learning environment. All educative events can be classified as
containing a salient event due to the use of human interactional sequences. Thus co-
creating a space that is aligned with acceptance and appreciation for the varied
uniqueness for and of each member is superb.

An exploration of Baudrillard’s word “synthesis” is an essential component as the principles of a blended curricula deliverance program is being solidified. Jean Baudrillard use of the word “synthesis” can be interpreted to mean an “integrated energy.” This conclusion of integrated energy occurs within an educative setting as multiple students and educators develop, see, hear, feel and experience the world differently. It is this palpable energy that is of importance. Based upon the first law of thermodynamics energy cannot be contained but transformed. While students and educators engage within the lens of a blended curricula deliverance program, the transformational opportunities are ever present, due to the embedded transactional exchange.

Upon examination of Jean Baudrillard words “Radiating Synthesis” one can deduce that any educative setting is riddled with an explosive and exploratory energetic integrated nature. This conclusion is derived from correlations between a pupil sense of self, environmental cueing systems and a systematic theory of exchange. What is of utter importance is how the energy or flow within classroom is channeled. Using the principles of A Blended Curricula Deliverance Program is one theoretical paradigm that provides educators with pedagogical methods to succeed within educational settings.
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