

Becoming an Advanced Practice School Nurse:  
A Meta-Bricolage

Dominique Duquette  
University of Victoria

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Supervisor: James P. Ronan PhD, MN, CPNP-PC. Assistant Professor, School of Nursing  
Project Committee: Lenora Marcellus RN, BSN, MN, PhD. Assistant Professor, School of Nursing

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### Abstract

This project is a meta-bricolage grounded in a neomodernist worldview. Researcher-as-bricoleur are handypeople using the tools at hand to construct practical and contextual knowledge. Here you will find a guerrilla theory about advancing practice as a school nurse and two literature reviews to refine the construct of school connectedness. While students' level of connectedness with school seems to have a protective effect on risk-behaviours, the causal relationships are unclear and inconsistencies in definition and measurement remain. This project oscillates between empirical, aesthetic and personal ways of knowledge development. The two literature reviews are guided by complementary theoretical perspectives. The first review using Whitemore and Knafl's (2005) Integrative method is carried out from a complex systems approach (Diez Roux, 2011) that enables the extraction of 1) feedback loops, 2) dependencies between individuals and 3) macro-level patterns that emerge from reviewing empirical data about the construct of school connectedness. The second review using Found Poetry (Prendergast, 2006) transforms the construct to evoke another meaning of school connectedness. The construct of school connectedness is measured through several concepts such as academic engagement, belonging, discipline and fairness, likes school, student voice, extracurricular activities, peer relations, safety and teacher support. School connectedness is a malleable construct through teacher training, social competence training, smaller school size, natural mentoring relationships, and democratic processes. Advanced practice school nursing is the ability to articulate the philosophical and theoretical foundations of the practice, application of scholarly thinking during practice to co-produce ideas that become the evolving foundations for a practice that promotes what is good, emancipatory and healthful for the school-community.

*Keywords:* advanced practice, school nurse, school connectedness, neomodernism, bricolage

## Table of Contents

Abstract.....	2
Acknowledgements.....	4
Introduction.....	5
Philosophical Perspective.....	6
Theoretical Perspectives.....	7
Guerrilla Theorizing.....	8
Complex Systems Approach.....	10
Aesthetic Knowledge Development.....	12
Methods.....	13
Found Poetry as Literature Review.....	13
Autoethnographicalisticexpialidocious.....	15
Integrative Review.....	16
Stage 1: Problem Identification.....	16
i) Health Care Problem.....	17
ii) Concepts.....	20
iii) Population of Interest.....	20
Stage 2: Literature Search.....	20
Stage 3: Data Evaluation.....	23
Stage 4: Data Analysis.....	24
Stage 5: Presentation.....	27
i) Feedback.....	30
ii) Dependencies.....	34
iii) Macro-level Patterns.....	36
Discussion.....	40
Limitations.....	43
A Bold Theory about Advanced Practice School Nurse.....	44
References.....	50
Appendix A: Quantitative Data Evaluation Framework.....	56
Appendix B: Theoretical Data Evaluation Framework.....	57
Appendix C: Review Data Evaluation Framework.....	58
Appendix D: Zine of Found Poem.....	59

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## Becoming an Advanced Practice School Nurse:

## A Meta-Bricolage

I am a handy woman fabricating a story to entertain you, the reader, with a real fiction about professional development. Inspired by Autoethnographic insights (Ellis, Adam & Bochner, 2010.) I will confide a personal theory about becoming an advanced practice school nurse, wrapped in recognizable ontological and epistemological duvets that have comforted me during my five years as a graduate student. I am an explorer oscillating between multiple ways of getting to know, tinkering and creating a meta-bricolage of nursing knowledge by felting art and science to guide my practice. Sensitive to the beauty of complexity, bricolage makers draw on multiple methods and theories to uncover new insights in developing context-specific knowledge at the edges of interdisciplinarity (Kincheloe, 2001, 2005). Kincheloe, who borrowed the concept of bricolage from Lévi-Strauss (1962) and continues the work of Denzin and Lincoln (2000), claims to be exploring new forms of complex and multimethodological inquiry into social, cultural, political domains.

I was inspired to use methods of literature reviews from both empiric and aesthetic ways of knowing in an attempt to ground my practice in evidences. I will therefore present you with two literature reviews: one using Whitemore and Knafli's (2005) Integrative Review with the goal of clarifying the construct of school connectedness, the other, evoking through Found Poetry (Prendergast, 2006) another flavor of the same construct. If you choose to draw conclusions and parallels, copy and paste, create and destroy, utilizing my story for your own creative process, I would be pleased to hear from you as my attempts at connecting with you will be vulnerably authentic. Although ethical approval was not sought out for this project, an ethic of care, solidarity, community, mutuality and civic transformation (Ellis, 2004) has guided this work. Jean, my life partner and main interlocutor in the narrative, has read, edited and consented to have a part of his life exposed in the name of research.

“ ‘It's a Barnum and Bailey world,  
just as phony as it can be,  
But it wouldn't be make-believe  
if you believed in me”

“It's Only a Paper Moon.”  
-Billy Rose and E.Y. “Yip” Harburg ”

1Q84  
Haruki Murakami

### **Philosophical Perspective**

Murakami is considered by cultural theorist Vermeulen and van den Akker (2009) to belong to a genre of artists known as Metamodernists. Metamodernism is a worldview coined by these authors that recognizes changes in aesthetics and culture moving beyond postmodernism. It is a distinct sensibility oscillating between modern and postmodern philosophical tenets, a negotiation between a need for universal truths and relativism. In nursing, Reed's Neomodernist approach offers a similar paradigm for knowledge development: “the freedom to explore and propose alternative ways and methods for nursing sciences while taking into account important historic values and traditions” (Whall & Hicks, 2009, p. 75).

- “I am who I am because of what and how I do and think, I think” I said in Jean's direction while we were having coffee and Irish Cream on the sunny porch. It was Saturday and the kids had left the house the night before to spend the week at their respective other parents. Toys were still seeded in the carpet of the living room where I was planning to work on my project through the weekend.

- “I grow ideas at the intersections of modernism and postmodernism, simultaneously challenging modernist ideas about truth and seeking to produce some knowledge through research in order to establish evidences to guide my nursing practice” I continued.

My nursing practice was all over the map: making money out of nursing in the Emergency Department and screening participants for a research project at UVic, calling myself a community

health nurse and writing a project about school health. Maybe the beauty of my nursing practice would be revealed at the end of my career. The part of my practice that was retaining most of my attention was the volunteer work within my children's school. I dreamt of becoming a school nurse and had joined the Parent Association to lead the Health Committee. The school was a place to apply my nursing knowledge and also to generate and test ideas for developing knowledge. The tenets of neomodernist philosophy posit a continuous oscillation between scientific knowledge development and its application to nursing practice.

According to Reed (2009), neomodernism is a new empiricism using new tools and methods for knowledge production, a new epistemology using multitude of patterns of knowing and a critical realism that values differences within a larger repertoire of human experiences. Neomodernism assumes an individual uniqueness and local truths that inform judgement about value-laden concepts such as good and healthy. It encourages an inquisitive mindset to keep metanarratives, theories and philosophies open, dynamic and contextually relevant. This new paradigm is not a shift away from postmodernism but an expansion to incorporate modernism's values into a meta-philosophy.

To transcend paradigms is also recognized as one of the most effective way to intervene in a system (Meadows, 2014). To shift the mindset or culture from which the system operates is not a small feat but Meadows believes it is where it can bring about the greatest changes. Within systems analysis leverage points are places where a small shift can affect great changes. Meadows' list of places to intervene in a system was selected as a resource easy to apply and learn from systems thinking by the Core Public Health Functions Research Initiative (Martin et al., 2012), a program of research focussing on the advancement of public health research in Canada. A neomodernist worldview is still one worldview but it is one that inspires the viewer to remain open to what is not yet real but possible.

### **Theoretical Perspectives**

A theory is a “creative and rigorous structuring of ideas that project a tentative, purposeful, and

systematic view of phenomena” (Chinn & Kramer, 2008, p. 305) and advanced practice nurses ought to demonstrate abilities to explain and apply the theoretical foundations of their practice (Canadian Nurses Association, 2008). Coherence between philosophy and theory is encouraged as balance, rhythm and unity of design in beauty. In tune with neomodernism, Rosemary Ellis (1969) pleaded for Practitioner as Theorist, claiming that theories are evolving conceptual structures for nursing practice that derive from everyday practice and scientific knowledge. The author recognized the contribution of empiricism to nursing knowledge and she also advocated for the use of intuition, exploration, speculation, trial and error, introspection and subjective impression in the development of nursing theory (Ellis, 1969). The following meta-project will be guided through three theories: Guerilla theorizing, complex systems approach and a structure of ideas about aesthetic knowledge development.

### **Guerrilla Theorizing**

The seemingly irreconcilable ways of knowledge production described above were reclaimed by Reed (2008) to inspire new ways of theory development in practice nursing such as Guerrilla Theorizing: an new interpretative, dynamic and contextual tool for producing knowledge. Reed (2006) anchored its activities within a neomodernist worldview where the nursing practitioner is not only a consumer and user but a producer of knowledge in everyday practice.

- “Where are you at with writing your project?” asked Jean, his nose still in the Focus section of the Globe, sipping our first cup of Irish coffee on the porch. He knew it helped me clarify my ideas to talk aloud and was habituated with these exchanges when he only needed to throw me a bone while continuing to read the paper. (My tendencies to get lost following my thoughts and diverging towards a philosophical LaLa Land were at times impractical) I appreciated his grounding voice calling me back to a reality where I was going to graduate with a written project submitted in partial fulfillment of the requirements for the degree of Masters in Nursing.

- “I am writing about the theoretical perspectives. I just finished with the philosophical



perspective and I was able to *weave* metamodernism and Murakami into it. I even used the word *oscillating*, twice. It amuses me to think that I am breaking ground in nursing by developing this bricolage... If Kincheloe (2001) is right about cutting-edge research living at the disciplinary borders then my work is key for scholar-practitioners. Anyway, the theoretical piece should not be too incendiary. I am drawing from three divergent theories to gain unique insights of multiple perspectives. It should really be called a thesis since I am uncovering new insights through Guerrilla Theorizing, but a thesis requires ethics approval and I really did not want to pay for an extra semester". Jean methodically folded the newspaper, looked at me and said: "You are funny, what is it that you are Guerrilla Theorizing about again?"

- "Well, some of the narrative will be about me becoming an advanced practice nurse and since the school nurse's role has almost disappeared from public health and educational systems, I am reinventing a new school-based advanced practice nursing role" I continued talking while I reached for the warm coffee pot on the picnic table.

- "Guerrilla-based strategies in art, and in nursing, are unconventional, embedded in the context and impermanent as Reed (2008) says. I already tried the conventional way when I presented the project of developing an advanced practice nursing role using the PEPPA framework (Participatory Evidence-Based, Patient-Focused Process for Advanced Practice Nursing) by Bryant-Lukosius and DiCenso (2004) to the Parent Association. It didn't go very far. It was basically shot down at round two with the Whole School Committee because it lacked a definitive role for the nurse..." I said while raising my brows. The Whole School Committee was more comfortable with short and concise projects because of the representative nature of the membership who each had to return to the monthly meetings of their sub-committee of origin to present the project and then return to the following Whole School Committee meeting to approve or reject a project. The timely processes of consultation through the various sub-committees assembled under a larger umbrella committee with no decision-making power

seemed democratic, but very slow in advancing projects considering the short nature of a school year and its interruptions during holidays.

- “The whole point was for its development to be participatory and not created by one person. I still feel some frustration from that time but I am using what I have learned from my experience to continue exploring school-based nursing practice.” Jean offered his cup to me as a symbolic gesture that I could continue talking as long as I poured him more coffee. “My hopes are those inspired by Guerrilla theorizing. I could use my imagination, existing knowledge, improvisation and abductive reasoning to put together ideas that project a tentative, purposeful, and systematic view of the development of an advanced practice school nurse role.” My mouth was dry and Jean's was open. We started laughing. Nothing like Irish Cream in my coffee to get me talking.

### **Complex Systems Approach**

According to Sterman (2006) “systems thinking requires us to examine issues from multiple perspectives, to expand the boundaries of our mental models, to consider the long-term consequences of our actions, including their environmental, cultural and moral implication” (p. 511). The approach assumes health as an emergent property of a system, in which processes operating at the individual level and at a population level are inextricably connected. MacDonald et al. (2012) recognize that complex health issues and scenarios within a complex world require an understanding of complexity-science in order to improve public and population health. According to Diez Roux (2011) complex systems approaches enable an understanding of the dynamic interrelations between components of population health and health disparities. For example, its application to population health disparities has potential to elucidate the “how” biology interacts with environment, and individuals with each other and the environment over time. The author points to three characteristics of population health where systems approach could be useful as a leverage point of minimizing health disparities. These are 1) feedback loops, 2) dependencies between individuals, and 3) macro-level patterns that emerge from

the interplay of factors at different levels (see table I). From a population health perspective, the school system operates at the intersection of biological and social processes and can present with similar characteristics. For example, feedback loops between behaviour and environment where healthy food availability promotes healthy eating which in turn creates a demand for healthy foods (Diez Roux, 2011). Feedback loops create nonlinear effects that can be distant in space and time with various degrees of impact on not only the outcomes of an intervention but changing the initial condition of implementation. Examples of dependencies between individuals are when the outcome for one individual is affected by the outcome in other individuals. These are situations that could involve allergies to certain foods in school. For example, families with children in the same classroom as students with allergies have to modify their eating patterns to accommodate this health threat. The third characteristic of population health are the macro-level patterns that emerge from the interplay of factors at different levels within the school. These could be understood by looking at the potential impacts on children's perception of teachers' support emerging from stressors such as jobs actions as a reaction to the collective agreement disputes between the BC Teachers' Federation on the Government of BC.

**Table I**

1. Feedback loops
2. Dependencies between individuals
3. Macro-level patterns that emerge from the interplay of factors at different levels of organization

These characteristics are often ignored in public health research (Diez Roux, 2011) and extracting them from the data about school connectedness has the potential to not only refine the construct but stimulate a creative analysis of the existing data that could hint at possible unanticipated side effects known as policy resistance. Policy resistance usually arise from a narrow conceptualization of reality (Sterman, 2006) and could be anticipated as possible effects to monitor when implementing new public health policies using a complex system worldview. For nurses, the lens that provide the Complex Systems Approach to view the public health data has the potential to illuminate important questions

about the etiology and policy of health disparities (Diez Roux, 2010).

- “Do you remember H el ene, the nurse we met during the health conference in PEI?” I asked Jean, walking towards him in the garden. I kneeled down on the grass next to him and assumed Child's Pose while he looked up as if the answer to my question would appear in skywriting. “Yes, from the University of Ottawa, right?” he said. “That's right, she wrote critical reflection about the advanced practice with vulnerable communities.” I responded while moving into Downward Dog. I stayed there, stretching my body and enjoying the rush of blood to my head. After three breath cycles, I closed the gap between my hands and feet and grew into Mountain Pose, one vertebra at the time. “ She believes that advanced practice nurses in the community can act as mediators between national, regional and local levels of organizations and the community (Laperri ere, 2006). She continues that one of the primordial capacities that advanced practice community health nurses must cultivate is a reflection about actions and interventions in the community to anticipate obstacles and the mechanisms to overcome them.” I exhaled and emptied my lungs, bringing my hands to my heart and the crown of my head to the sky, my feet firmly planted on the ground. “Nice Yogademic my love...” Jean said, still looking at the “canvas sky hangin' over muslin trees” (Rose & Harburg, 1933)

### **Aesthetic Knowledge Development**

In 1978, Barbara Carper identified four fundamental patterns of knowing in nursing. Along with empirical knowledge, the personal, the ethical and the aesthetic are non-empirical ways to develop nursing knowledge that were groundbreaking for Chinn and Kramer's (2008) work with integrated theory and knowledge development in nursing. For these authors, the aesthetic component of knowledge development refers to the connection to deep meaning of a situation which calls for creative resources that transform. It provides the discipline with a source of appreciation and inspiration for what is not yet real. (Chinn & Kramer, 2008). The art of nursing expands perceptual capacities into what could be possible. It is noted that aesthetics does not equal beauty but the nursing art/act must be

controlled by the perception of balance, rhythm, proportion and unity.

- “Art does not have to be *good* art, or does it?” I ask Jean peeking over his shoulder as he worked on a drawing inspired by the Norse myth of Odin, the one-eyed God of war and deceit. “ It depends on who you talk with... I guess the value judgement resides in the eye of the viewer. Certainly, good art must aspire to establish meaningful connections and follow specific aesthetic criteria” he said in the tone of someone who's been schooled in the visual arts.

Viewed through an aesthetic lens, the narrative explores meaning-making to create understanding about becoming an advanced practice school nurse. Mattingly (as cited in Chinn & Kramer, 2008) offers a series of principles to create stories: interaction between characters, stories organized within time-space, stories incorporating changes and conflicts; stories with struggle or tension in order for the plot to unfold towards an ending that illustrate new possibilities. Akin to the systems thinking models that requires the expansion of our mental models, aesthetic knowledge development inspires envisioning what is not yet tangible.

## **Methods**

### **Found Poetry as Literature Review**

A literature review is a systematic method of exploration, evaluation and summarization of research about a phenomenon of interest which can contribute significantly in developing evidence-based practices (Lobiondo-Wood & Haber, 2007). As an art-based approach to literature review, Found Poetry can yield important and otherwise invisible insight during an inquiry (Butler-Kisber, 2002). Prendergast (2006) expressed her views on the thoughts and words of others through a re-creation of their texts. In her doctoral dissertation, she inserted these poems as interludes between the chapters. Found Poetry was used as an alternate mode of understanding and representing evidence in her inquiry. In this project, an aesthetic lens was used to review some of the articles retrieved for the Integrated Review. As a literary bricolage or intertextuality words from Bonny, Britto, Klostermann, Hornung and

Slap (2000) were extracted while the surrounding text was blacked out to recreate meaning about the construct of School Connectedness. The intention is to evoke an emotional response to the empirical data and to stimulate another way of getting to know the concept. The selected poem can be appreciated in a Zine format in Appendix E. Zines, short form for magazines, are self-published chapter books that are gaining greater appreciation as a form of emancipating ways of knowing. Surging from underground culture, activists have long used self-publishing means to disseminate their opinions in pamphlets and leaflets forms. The Zinesters culture is well established in Canada with publication such as brokenpencil. In her article, Gibb (2014) describes the ways Zine making in schools give students the opportunity to go into the community, research subjects that interest them and report about it in a format that is accessible. The first issue of the zine *Plethora* was made for a 24 hours Zine Project and distributed during the L.A. Zine Fest on February 16<sup>th</sup> 2014. As dynamic and contextual tools for knowledge translation, Zines are one way for the construct of school connectedness to gain greater appreciation among school nurses while introducing them to innovative ways to promote health with students.

- “For me, Found Poetry is the destruction and creation of evoking meaning-making through language, an artful dialogue between writer-reader/writer-reader”. I had been working for a while on theoretical perspectives while Jean was gardening. We had just sat down for a light lunch of warm potage and fresh kale salad.

- “Borges' short stories usually fill me with ideas. His erudition, his delight and profound wonder at the strangeness of existence influences my drawings” Jean replied. “Yes, I enjoy reading *Dreamtigers* (Borges, 1964) and some of the transcriptions of his lectures to inspire and guide the aesthetic literature review” I said. We continued eating in silence, dreaming away from the table with *Imaginary Beings* at our side. As an artist, Jean has always inspired me. I want to see the world through his eyes. His attention to beauty in the mundane details of the world is fascinating, invisible objects

become tangible when he looks at them. He sees what is not yet possible and piles of free stuff by the road become artifacts in his home, a cabinet of curiosities.

### **Autoethnographicalisticexpialidocious**

Chang (2008) assert that Anderson, Ellis and Bochner, Nash, Reed-Danahay and Tompkins have “plowed through the wilderness” (p.10) yet, autoethnography as a path to research is still overgrown. The method is akin to ethnography where the research field is the “self”, the personal, emotional, political, social, and cultural self. “An introspection portrayed in dialogues, scenes, characterization and plot” says Ellis (2004, p. xix). Some authors believe that rather than simply telling a story, autoethnography as an approach to inquiry encouraged a more rigorous data collecting and analysis that is beyond entertainment. Its duty to interpret the data within a broader sociocultural context is affirmed by Reed-Danahay (1997). Other authors prefer to evoke, rather than educate, leaving the interpretation of the data out of the process for the reader's uptake.

- “Talking about your drawings, I have noticed that you dislike interpreting them for other people. It seems you would rather that people come up with their own understanding of what captures their attention”. Jean nodded, his mouth full. His artistic style, being more metaphorical, articulates his thoughts about the strangeness of existence through drawings; no words, a different language than mine. “Really, I think that what people see in art is more indicative of what is going on inside themselves rather than insights about the inner worlds of the artist.” I continued, articulating my rationale for Guerilla Theorizing autoethnographically. “I want to present a collection self-reflective data, in an evocative manner, revealing meaning about advancing my practice without analyzing it for the purpose of generalization, but creating an unconventional, contextual, impermanent and *Bold Theory of Advanced Practice School Nursing Role Development*”. “Like Hannah Arendt's (1973), storytelling as an activity revealing meaning without defining it,” Jean said. “That sounds about right,” I continued, “although, more precisely, not defining it yet since the process of change through my

practice goes beyond this project and its underlying patterns can not be exposed entirely within this story.” I said, walking back towards the computer.

-“Lunch was delicious my love, thank you. Would you like to go for a bike ride this afternoon? I saw a garage sale sign up the street.” Jean said. “Sorry, I have to use the time I have without the kids to advance this project. You go and have fun, my hunter-gatherer. Maybe you can peel me off the computer after dinner for a midnight stroll.” I replied.

### **Integrative Review**

Many approaches to conducting literature reviews have been developed to best locate, evaluate and synthesize similar data. As Greenhalgh points out, as the rigour in research increases, so have the methods to conduct literature reviews evolved to analyze, critique, and summarize the data produced by primary research (as cited in Whitemore & Knafl, 2005, p. 547). With its multiple ways of knowing, primary data in nursing research travels vastly on the scientific orbit. Whitemore and Knafl's (2005) enhanced integrative review offers the possibility of synthesizing data from diverse types of knowledge, such as empirical and theoretical, as well as providing tools to increase analytical rigour. Whitemore and Knafl's (2005) Integrated Review utilizes Cooper's five stage process for conducting research review: 1) Problem Identification, 2) Literature Search, 3) Data Evaluation, 4) Data Analysis, and 5) Presentation.

**Stage 1: Problem identification.** The World Health Organization's report (2013) states that major leading causes of deaths, disease and disabilities can be reduced by preventing certain behaviours initiated during youth. In the United States of America, organizations such as the U.S Department of Education's Investing in Innovation Funds has partnered with the Search Institute (1990) in developing the 40 Developmental Assets, a framework that identifies skills, experiences, behaviours and relationships that enable young people to develop into successful adults. In British Columbia, the Child and Youth Health and Well-Being Indicators Project (2013) recognizes five dimensions that are



the foundation of child health and well-being. Along an axis of dimensions and ecologies and across age spans, 51 indicators of child and youth health and well-being are included in the Provincial Health Officer's report. Each indicator is accompanied by a concept and a measurement. The indicator school connectedness rate is conceptualized by school connectedness.

***Health care problem.*** Many studies have revealed a strong protective effect of school connectedness on smoking susceptibility among youth (Azagba & Asbridge, 2012) and on risk-taking behaviours (Chapman, Sheeman & Schochet, 2013). However, conflicting data, from McNeely and Folci's (2004) research review of the concept (as of 2003) reveal that social belonging, a dimension of school connectedness, does not protect youth from initiation of health-risk behaviours such as smoking and drinking to the point of getting drunk. Research supports the idea that adolescents can develop connections to individuals who engage in at risk behaviours, and report a high level of social belonging while engaging in at risk behaviours themselves. These authors believe that the construct of school connectedness is too broad to provide clear guidance to policies makers and practitioners. Libbey (2004) has identified nine concepts that relate to the construct of school connectedness: academic engagement, belonging, discipline and fairness, likes school, student voice, extracurricular activities, peer relations, safety and teacher support.

The higher level construct of school connectedness not only seems to be composed of many concepts but its measurement varies greatly across studies. Within the Provincial Health Officer's (2013) report, school connectedness rate is measured by a scale from the B.C Adolescent Health Survey designed by the McCreary Centre Society. Most of the items on the survey were derived from other youth health surveys. In particular, questions relating to the connection of adolescents to school were borrowed from The National Longitudinal Study of Adolescent Health (Add Health) from the Carolina Population Centre at the University of North Carolina and distributed during the first wave of data collection between September 1994 and April 1995, a period predating the Wingspread

## Declaration on School Connectedness.

In their study, Azagha and Asbridge (2013) used multilevel logistic regression models that adjusted associations between school connectedness and smoking susceptibility with data from the Health Canada's Canadian Student Tobacco, Alcohol and Drug Survey (formerly known as the Youth Smoking Survey), a biennial survey administered to students in grades 6-12 across Canada. The national survey utilizes a 5-item scale adopted from Bonny, Britto, Klostermann, Hornung and Slap (2000) who themselves used a modified version of Add Health to measure school connectedness. Even though there seems to be consistency with the tools measuring the concept, Scales (1999) suggests that no intervention study demonstrated how an increase in social connection impact health. Findings are based solely on correlation studies. With a higher level construct composed of many concepts; a plethora of measuring instruments; and an important determinant of health residing within an unclaimed dimension of health; how can advanced practice nurses minimize health inequities for youth when implementing programs seeking to increase school connectedness?

- "My head hurts! I need some fresh air" I said to myself walking outside. Jean had returned from his bicycle journey and was lounging in the blue chair by the brick oven in the middle of the patio. The travel section of the paper was folded as an air plane and resting on his chest. "Where are you going?" he asked, half asleep. "Just here, beside the world, my world." I replied, sitting on the warm stones. "I think I skipped a step. I am writing about the *Unclaimed Dimensions of Health*, but I forgot to introduce the idea somewhere in the beginning," I muttered while massaging my temples, my head hanging low. "The stuff I meant is that in schools, it seems that everyone has their territory or domain of expertise. When nursing was mainly about the physical dimension of health, public health nurses' domain was clear like immunizations. But now that we are venturing into the business of the Social Dimension of health who's domain is it?" I asked, mainly to the chickens pecking in the grass since Jean had slumbered back under the paper air plane.

Questions like this are raised in Raphael's (2011) discourse analysis of the determinants of health which argues that even though most stakeholders recognize the need to address the social determinants of health in order to reduce health inequities, their efforts have failed at recommending implementable actions within the dominant social structure of interdependencies.

With some health research demonstrating that “healthier students are better learners” and that health disparities affecting youth are shaped by the dynamic interrelationships between social and environmental factors (Basch, 2011), school health programs ought to review, evaluate and implement actions within the social dimension of health. Some schools are already implementing programs that focus on increasing connectedness as a mean to reduce risk-taking behaviours in youth (Chapman, Buckley & Sheehan, 2013) and theoretical models are being developed (Waters & Perth, 2009) to support this growing interest in the concept. Although, as McNeely and Folci (2004) argued, the construct of school connectedness lacks clarity, and different concepts are being measured with various tools (Libbey, 2004). The main purpose of this project is to clarify the construct of school connectedness for Advanced Practice nurses who would work in schools by drawing attention to the feedback loops and dependencies between individuals and macro level patterns that are emerging from the interplay of factors at different levels of organization: synthesizing existing information within education and health literature in order to contribute to nursing knowledge as it relates to practice, education and leadership in school health.

-Thank you for making dinner Jean, it was beautiful,” I said. As the end of the day approached, Jean collected the last dirty dishes from the simple and elegant meal of roasted root vegetables, goat cheeses and fine charcuterie. I was sitting at the candlelit table and savouring our new favourite- peaty whiskey from Compass Box.

- “I have the feeling that School Connectedness is the new bandwagon, like Health Promotion was in the 70's. If we are not paying attention to what exactly we are implementing, we risk widening

the gap between the rich and poor kids. I mean, maybe the kids that are already feeling connected to the school will have an increased sense of connectedness through all the programs being implemented and the kids that feel left out could drop out because our initiatives are not designed with them and for them,” I ranted. “Yes, I know what you mean” he responded walking back towards me, putting his hands on my shoulders and pressing his thumbs in a slow and circular motion between my blades. “Lets relax this evening my love, do you want to listen to the new record I got? It is by a band from Seattle and they sound like that other band I like.” he said. “Doesn't everyone from Seattle sounds like that other band you like?” I said half-jokingly.

**Concepts.** The Wingspread Declaration on School Connections is a document based on the review of research and discussion amongst various professional stakeholders who met for a conference in June of 2003 in Wingspread, a National historic landmark designed by Frank Lloyd Wright and administrated by The Johnson Foundation near Racine in Wisconsin. The document defines the construct as the belief, by students, that adults in the school care about them (Wingspread, 2003). School connectedness is a construct often simplified and used interchangeably with other concepts such as school engagement, involvement, bonding, attachment. For AP school nurses, the construct seems new as the literature within the health domain is sparse but growing. AP school nurses who often work from a community/public health perspective engage in applying knowledge about concepts such as health promotion and inequities in health.

**Population of Interest.** As adolescence is a time of changes for the individual, a time when risk-taking behaviours seem to increase and connection to family seems to decrease, AP school nurses are in a ideal position to work with this population in developing and maintaining health promoting behaviours, advocating for health promoting organizational structures and policies, and contributing to knowledge development about school health.

**Stage 2: Literature search.** In order to capture a maximum of eligible empirical and theoretical

studies, the literature search was done utilizing four computerized databases from the University of Victoria: CINAHL, ERIC, MedLine with full text and PsycINFO were searched through EBSCO host. The concept words used were taken from Libbey's (2004) review of the concept School Connectedness for the special edition on the topic by the Journal of School Health: "school connect\*", "school climate", "school engagement", "school bond\*", "school involvement", "school attachment", "teacher support", "positive orientation to school", "student satisfaction with school" and "student identification with school". The use of \* to truncate the concept words was a suggestion of the librarian, Carole Gordon (personal communications, January 2014)), to include further concept words derived from the same prefix.

Other concept words were added to Libbey's (2004) list mentioned above, since a preliminary search of the literature had revealed that "school disconnectedness" and "school disengagement" was also used in recent studies. These concept words were connected by the Boolean operator OR, and assembled between parentheses searched within the titles (TI) of citations. The additional concepts used in combination with the Boolean operator AND were "health promotion" and "community health". These later concepts were searched within the full text of citations since their use in titles or abstracts did not retrieve important articles such as the Azagha and Asbridge (2013) study on smoking and school connectedness which did not mention the word "health" until the first paragraph of their article. "Health promotion" and "community health" were specifically used in order to refine the search to a domain of interest for school nursing practice. A preliminary search using the concept word "nurs\*" revealed only six citations in the last 10 years. See table II and III for a list of terms used and flow chart of search process.

The search was limited to scholarly and peer-reviewed journals published after 2004, the year of the Declaration on School Connectedness. The search was not limited to full text in order to retrieve possible pertinent articles where full text is available through a link and not directly from EBSCO Host.

A total of 16 citations were retrieved on February 4<sup>th</sup> 2014. Duplicates were removed and 14 citations were left. The abstracts were hand reviewed and further refined with the following inclusion criteria: Reports and research conducted in Canada, USA, UK , Australia and New Zealand were included. These countries are of particular interest for school nursing because the role of school nurse is recognized and supported. Research targeting students from grade 6 and higher were included to reflect a time in adolescent development when the adoption of health compromising behaviours increases. Literature with specific population of interest such as children with asthma, area of interest other than school climate, and gender specific research were not included in this review. The reference lists of important articles were reviewed and citation tracking was conducted through Web of Science for purposeful sampling of documents of interest. Six citations, including two reviews of the literature were purposefully added to capture important data. A total of 15 citations, two theoretical reports, two reviews of the literature and 11 quantitative studies were included in this integrative review of the literature.

**Table II**

“school connect\*” OR “school disconnect\*” OR “school climate” OR “school engagement” OR “school disengagement” OR “school bond\*” OR “school involvement” OR “school attachment” OR “teacher support” OR “positive orientation to school” OR “student satisfaction with school” OR “student identification with school”  
AND “Health promotion” OR “community health”

- “How are you my love?” I asked Jean over the phone. A week had gone by since our morning irish coffee on the porch, and we had returned to our together-living-apart arrangement-our lives synchronously oscillating with the rhythm of our respective children moving between parental homes. “Pretty good, the kids are playing outside and I am drawing a story for the second installment of the SnailSpit zine. How is the literature search going?” he said.

-“Meh! I am having trouble narrowing the search to a manageable size. The librarian was pretty please with using the concept word 'health' and the 136 hits, but I feel paralyzed. I tried using 'health

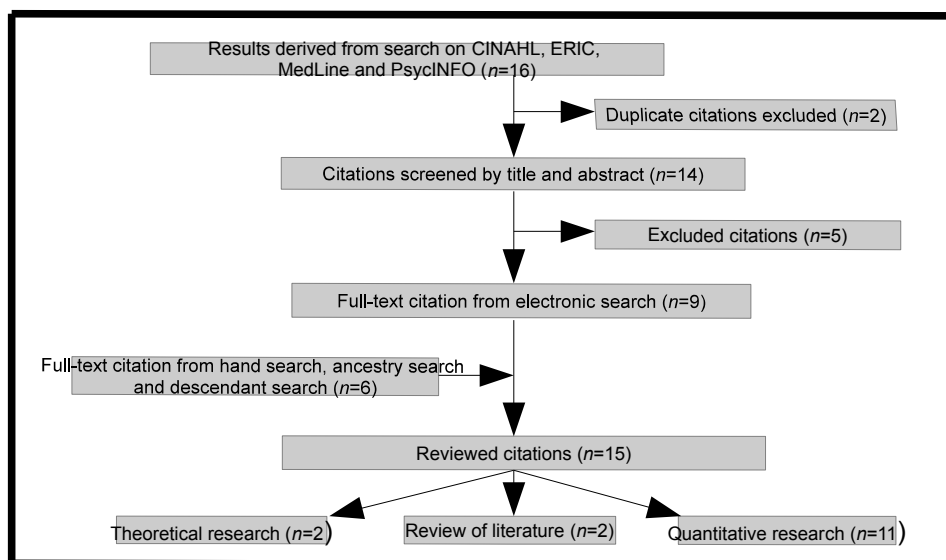
promotion' and 'community health' as concept words and it resulted in 16 citations which is a manageable size, but I feel like I am losing out on the 'breadth' quality of the review. I still ended up with citations that appear to be significant in other reviews," I responded.

-“Health promotion and community health are concepts that you use often in your work, what is wrong with them?” Jean asked. “Nothing wrong, but I am concerned about bias. I am choosing these concept words conveniently because it reduces the amount of hits to a manageable size,” I whined.

-“Nothing wrong with convenience, baby-do it and state it and you will graduate,” he laughed.

-“Yeah okay, thank you for the pep talk. I guess I have to keep working if I want to conveniently graduate. Have a good weekend with the kids,” I said. “Bon courage,” Jean replied tenderly before hanging up the phone.

**Table III**



**Stage 3: Data evaluation.** Whittemore and Knafl (2005) assert that evaluating the quality of primary sources within an Integrated Review can be complicated due to the multiple design of studies involved. For this review, three distinct evaluating frameworks were developed based on Lobiondo-Wood and Haber (2009) and Chinn and Kramer (2008) (see Appendix A,B and C). Citations were graded on a 30 points quality scores. The quality of the literature reviewed scored within a range from 12 to 30 points each. The score of each citations was incorporated into the data summary table.

- “HowRU?” Overwhelmed, I think to myself, looking at Jean's text. The feelings are too complex to engage in text messaging. I spent many hours formatting the evaluations tools, printed one for each citations and reread the reports with the quality criteria in mind as I responded to the questions from the evaluation tools. I attempted to be fair in my evaluation of the reports, but honestly, after the fifth one, the ironist side of my personality started to emerge and I developed some contempt for rigour in research. Most of the questions suggested to evaluate the quality of research reports were designed to be answered by a simple yes or no, although when used in practice I was faced with yes buts, and no maybes. Are critiquing criteria holding research up to unreachable gold standards for practice? Is research always good research? And could we ethically base practice on “good enough” research? It seems as if constraints such as time and money are invisible in evaluating the quality of a study. Perhaps results should be considered in light of those limitations as well.

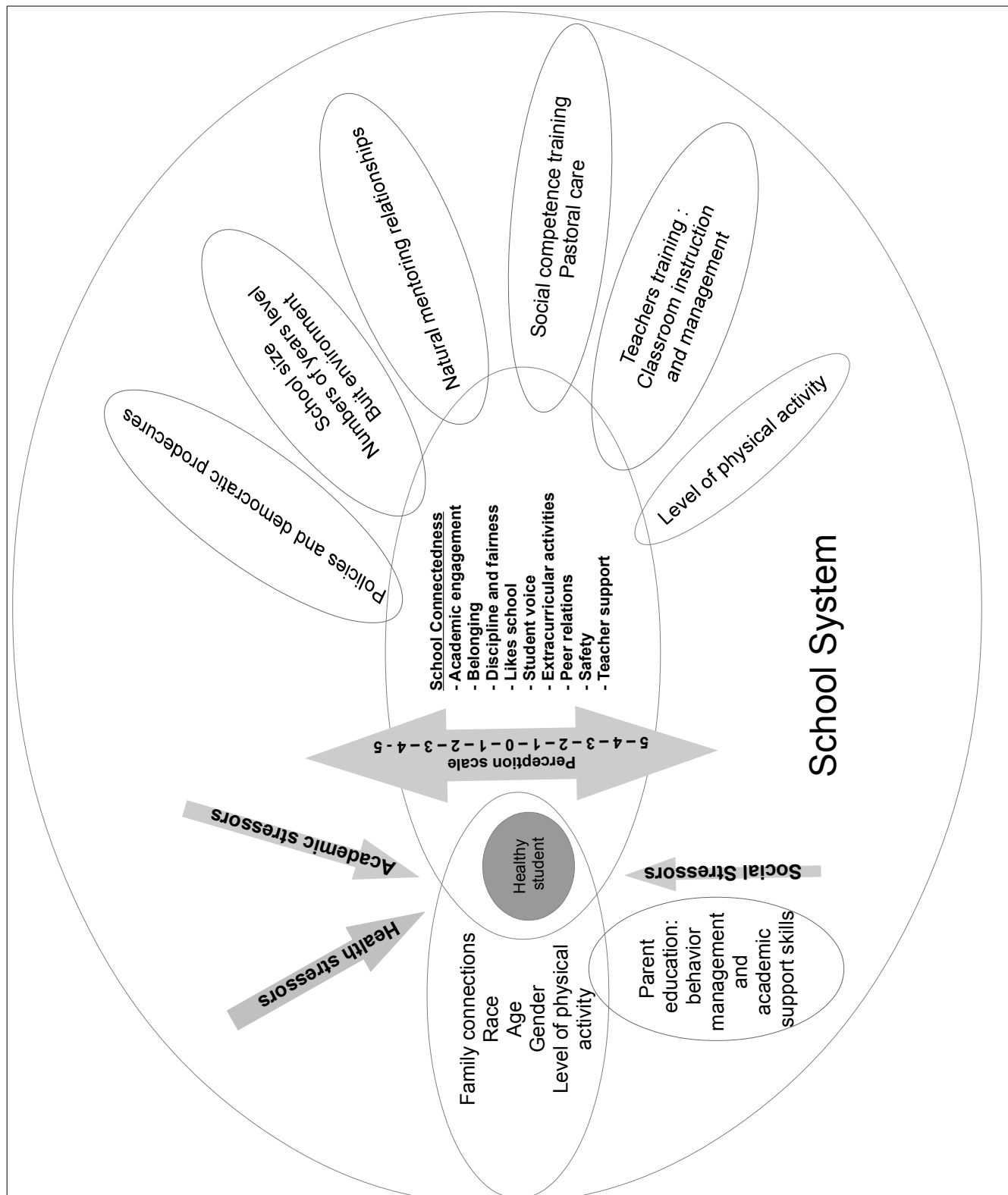
- “I ought to start from the end next time around,” I texted Jean. It pleased me to fancy the curves on his lips as he drew a mental image from the text. By the end of the evaluation process, my grading had become hasty and comments scarce. The time allocated for schoolwork was over, and I had to get to my paid work in order to financially provide for my children. I ended this stage with one thing in mind: I ought to inverse the alphabetical order of the citations list in order to start analyzing the citation evaluated last with a calm disposition in hope of increasing analytic rigour.

**Stage 4: Data analysis.** The main goal of Whittemore and Knalf's (2005) data analysis stage is to synthesize the evidence into an innovative interpretation. The stage has five phases: Data reduction, display, comparison conclusion drawing and verification. This review applies a Complex Systems Approach to data analysis by categorizing the data into subgroups. Each study was reviewed to extract the 1) Feedback loops, 2) Dependencies between individuals, and 3) Macro-level patterns that emerge from the interplay of factors at different levels of organization. The extracted data was organized and displayed into a conceptual map (See figure I) to facilitate the recognition of patterns and relationships.



FIGURE I

Working conceptual map about school connectedness developed from Duquette (2014)



Through an iterative process of examination, reflection and verification an innovative interpretation of the data started to emerge. Iterative cycles of conclusion drawing, verification of the interpretation and examination of the data were practiced until the exhaustion of resources available to produce the project.

- “Wouldn't you agree that the shared custody of children has the flavor of salty caramel ice cream?” I asked Jean as we ended yet another delicious meal prepared in his kitchen a town away from mine. He started laughing “ I guess so, what about the flavor of data analysis? Have you finished with this stage yet? You seemed a bit stressed out yesterday.” he said. I wanted to stare just a little longer at the ice cream melting in my spoon, inspired by the beauty of the white and amber patterns, before oscillating towards empirical ways of knowing once more.

-“Well, its bittersweet at this time, I have searched and searched for concise information about feedback loops, dependencies between individuals, and macro-level patterns without much success. I continue to educate myself about the approach as a re-reread the citations and verify my analysis but I am less and less confident about my cognitive capacities in articulating an *innovative* synthesis. It's like I am missing the blue and red lens from the 3D glasses in order to see the details pop up from the text. I have an empty frame on my nose and its all blurry. I feel rationally bounded,” I appreciate metaphorical lenses as a wearer of spectacles myself and remember cutting glasses out of paper bags to illustrate an Equity Lens to the kids when I was working with the Health Promotion Network at UVic. Crafting and social sciencing with the kids is always amusing.

-“Ah ah...Your project is far from being rational. Don't worry so much, it's coming together. You will find a way to make sense of the concept in your practice at the school. When is your meeting with the principal again?” Jean asked. “I am meeting with him next week to talk about a proposal for a school nurse. I have also slipped a word to the regional representative for the school district when I introduced myself to him at a conference in Movember. I think I made an impression with my felted

moustache” I said musing about the entertaining ways to promote men's health during the month of November renamed 'Movember' as a play-on-words with moustache and November.

**Stage 5: Presentation.** Within this final stage of Whitemore and Knafli's (2005) Integrative Review, each citations is summarized and displayed in table IV in order leave artifacts for the readers. The synthesis is organized into extracted subgroups according to the guiding theoretical lens: 1) feedback loops, 2) dependencies between individuals, and 3) macro-level patterns that emerge from the interplay of factors at different levels. The limitations of the review will be stated following the discussion.

**Table IV**

<p><b>Azagba, S., &amp; Asbridge, M. (2013). School connectedness and susceptibility to smoking among adolescents in Canada. <i>Nicotine &amp; Tobacco Research, 15(8), 1458-1463; 1463.</i></b></p> <p><i>The aim</i> of this quantitative study was to examine whether individual connectedness to school was protective of susceptibility to smoking among students in grade 6 to 8. <i>The sample</i> was from a nationally representative data set from Youth Smoking Survey. A total of 12 894 Canadian students responded to the biennial classroom-based survey. <i>The method</i> consisted of a cross-sectional and multilevel logistic regression analysis on the dependent variable susceptibility to smoking the independent variable school connectedness. <i>The results</i> found a strong protective effect of school connectedness on smoking susceptibility. Evaluation score: 27</p>
<p><b>Black, D. S., Grenard, J. L., Sussman, S., &amp; Rohrbach, L. A. (2010). The influence of school-based natural mentoring relationships on school attachment and subsequent adolescent risk behaviours. <i>Health Education Research, 25(5), 892-902.</i></b></p> <p><i>The aim</i> of this quantitative study was to hypothesize and test a mediation model. The authors predicted that natural mentoring relationships will be positively associated with school attachment and predict risk behaviour outcomes. <i>The sample</i> was of convenience from 65 high schools from 14 school district in eight states. The data was recruited as part of the Project Toward No Drug Abuse, an evidence substance abuse prevention program. <i>The method</i> was experimental and participants were randomly assigned to one of three conditions for the delivery of the program. Regular teacher training, supported training and standard care control. Students complete a paper-and-pencil questionnaire during class and a telephone interview to collect data at 1-year follow-up. <i>The results</i> suggested that natural mentoring relationships had a protective effect on eight risk behaviours through positive association with school attachment mediator. Evaluation score: 26.</p>
<p><b>Bonny, A. E., Britto, M. T., Klostermann, B. K., Hornung, R. W., &amp; Slap, G. B. (2000). School disconnectedness: Identifying adolescents at risk. <i>Pediatrics, 106(5), 1017-1021.</i></b></p> <p><i>The aim</i> of this purposefully chosen quantitative study was to identify potentially modifiable factors that differentiate youths who do not feel connected to their school. <i>The sample</i> population was all students attending grades 7 to 12 from 8 public schools, in total 1959 surveys were interpreted. <i>The method</i> was a modified version of the Add Health in-school survey and measure the school connectedness score with a five-item scale. Bivariate analysis was used to evaluate the association with 13 self-reported variables identified as modifiable factors. <i>The results</i> showed that four potentially modifiable factors were associated with school connectedness: Declining health status, increased school nurse visit, cigarette use and lack of extracurricular activities. Moreover black race, female gender and urban school were associated</p>

with lower school connectedness. Evaluation score: 21

**Carter, M., McGee, R., Taylor, B., & Williams, S. (2007). Health outcomes in adolescence: Associations with family, friends and school engagement. *Journal of Adolescence*, 30(1), 51-62.**

*The aim* of this quantitative study was to examine the association between connectedness to family, and friends, and school engagement and selected health-compromising and health promoting behaviours. *The sample* was 652 randomly selected students from high school in New Zealand. *The method* consisted of a cross-sectional analysis from a web-based survey. The *results* revealed that school engagement strongly related to low levels of health compromising and high level of health promoting behaviours, and that connectedness to friends was associated with increased reports of health-compromising behaviours. Evaluation score: 20

**Chapman, R. L., Buckley, L., Sheehan, M., & Shochet, I. (2013). School-based programs for increasing connectedness and reducing risk behaviour: A systematic review. *Educational Psychology Review*, 25(1), 95-114.**

*The aim* of this review was to critically examine the literature on school-based programs targeting increased connectedness for reductions in risk behaviours. The authors argue that despite the important issues relating to definition and measurement, it is time to move beyond trying to understand the concept and focus on identifying possibilities for potential enhancement of school connectedness for behaviour change and associated program evaluation. *The sample* was 14 articles describing seven school-based programs. *The method* consisted of a searching for key phrases within six scholarly databases to retrieve articles published within the last 15 years (as of 2011). The search was delimited using explicit inclusions and exclusions criteria. A table summarizing the examined articles. The analysis was conducted from three specific theoretical foundations: Attachment theory, Social Control theory and Social Development model. The *results* showed a lack of consistency in the definition and measurement of the concept and limited mediation analysis testing the assumptions of impact on risk-taking behaviours thought increased school connectedness. Evaluation score: 24

**Faulkner, G., Adlaf, E. M., Irving, H. M., Allison, K. R., & Dwyer, J. (2009). School disconnectedness: Identifying adolescents at risk in ontario, canada. *Journal of School Health*, 79(7), 312-318.**

*The aim* of this quantitative study was to replicate a previous study identifying factors that differentiate youth who do not feel connected to their school using a Canadian sample. *The sample* was 2243 students from grade 7 to 12. *The method* consisted in applying logistic regression analysis to data from the 2001 Ontario Drug Use Survey. The *results* revealed that the odds of feeling disconnected from school was greater for girls who perceived their health and academic performance to be poor, engaged in no vigorous activities and reported 3 or more physician visit during the past year. Evaluation score: 18.

**Langille, D., Rasic, D., Kisely, S., Flowerdew, G., & Cobbett, S. (2012). Protective associations of school connectedness with risk of depression in nova scotia adolescents. *The Canadian Journal of Psychiatry / La Revue Canadienne De Psychiatrie*, 57(12), 759-764.**

*The aim* of this quantitative study was to determine whether school connectedness demonstrates an independent protective association with risk of depression in students. *The sample* was 408 high school students from a rural community in Nova Scotia. This study is one of the few Canadian research into school connectedness with Canadian students. *The method* consisted of a self reported survey using logistic regression of data measure by a 12-item scale developed by the Centre for Epidemiologic Studies Depression (CES-D). The *results* showed that a higher school connectedness level was independently protective of risk of depression in girls. Evaluation score: 17

**McNeely, C., & Falci, C. (2004). School connectedness and the transition into and out of health-risk behaviour among adolescents: A comparison of social belonging and teacher support. *The Journal of School Health*, 74(7), 284-292.**

*The aim* of this quantitative study was to explore the association between two dimensions of school connectedness-perceived teacher support and belonging, and the initiation, escalation and reduction of participation in six health-risk

behaviours. The hypothesis was that teacher support will lead to delayed initiations of health-risk behaviours and the effect of teacher support will be mediated by social belonging is based on a theory model from Connell and Wellborn (as cited in McNeely & Falci, 2004) who previously supported result for academic outcome but has not been tested for health outcome. *The sample* was drawn from the same data set as Resnick et al., the Add Health and incorporated the analysis of the data from wave 2 of the research project, a one year follow-up interview (n. 13 570). *The method* utilized conditional multinomial logistic and conditional logistic regression to model the probability of transition both into and out of the health-risk behaviours. The *results* showed that different dimensions of school connectedness have different effects on the initiation of six health-risk behaviours: Cigarette smoking, drinking to the point of getting drunk, marijuana use, suicidal ideation or attempts, first sexual intercourse, and weapon related violence. Evaluation score: 30.

**McNeely, C. A., Nonnemaker, J. M., & Blum, R. W. (2002). Promoting school connectedness: Evidence from the national longitudinal study of adolescent health. *Journal of School Health, 72(4), 138-146.***

*The aim* of this purposefully chosen quantitative study was to explore ways in which schools can enhance school connectedness using a stage-environment fit perspective. *The sample* was taken from the Add Health, a total of 71 515 students in 127 schools. *The method* was a confidential paper-and-pencil survey. The *results* were that positive classroom management climates, participation in extracurricular activities, tolerant disciplinary policies, and small school size were associated positively with higher school connectedness. Evaluation score: 30

**Ozer, E. J. (2005). The impact of violence on urban adolescents: Longitudinal effects of perceived school connection and family support. *Journal of Adolescent Research, 20(2), 167-192.***

*The aim* of the quantitative study was to extend the empirical literature on the relationship between exposure to violence and psychological functioning. The author hypothesized that school connection and greater perceived support from family members assessed in 7th grade would moderate the relationship between adolescent's recent experiences of violence and their psychological functioning in 8th grade. *The sample* was 73 adolescents of the 115 ethnically diverse students, from two urban schools, 55% female and 45% male who participated in a cross-sectional study one year prior. *The method* consisted of 45 minute surveys administered by the PI with one year interval. Teachers rated participating students functioning and anxiety or depressive symptoms and academic performance data was obtained from school records. Positive parental consent was required, survey instructions and the limit of confidentiality was read aloud to students, individual attention was provided for students needing reading assistance. The *results* highlighted that family support was a moderator of the relationships between exposure to violence and adolescent mental health. Evaluation score: 16.

**Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., Jones, J., et al. (1997). Protecting adolescents from harm. findings from the national longitudinal study on adolescent health. *JAMA: The Journal of the American Medical Association, 278(10), 823-832.***

*The aim* of the quantitative study was to identify risk and protective factors at the family, school and individual level as they relate to four domains of adolescent health and morbidity: emotional, violence, substance use and sexuality. *The method* was a cross-sectional analysis of interview data from the National Longitudinal Study of Adolescent Health, interviews were completed in the subject's home. The sample was 12 118 adolescent in grades 7 through 12 and drawn from an initial national school survey of 90 118 adolescent from 80 high schools and their feeder middle schools. The *results* are parent-family connectedness and perceived school connectedness were protective against every health risk behaviour measured except history of pregnancy. Evaluation score: 30

**Rowe, F., Stewart, D., & Patterson, C. (2007). Promoting school connectedness through whole school approaches. *Health Education, 107(6), 524-542.***

*The aim* of the theoretical paper was to develop a framework to demonstrate the contribution of whole school approaches to the promotion of school connectedness. *The method* used to develop the framework was a cross-disciplinary review of the literature. *The sample* "included peer-reviewed articles and published books and reports identified from databases spanning the education, health promotion, schools, social sciences and science disciplines and used search terms encompassing health and mental health promotion, schools, social connectedness, belonging and attachment" (Rowe,

Stewart & Patterson, 2007). The *results* revealed the two mechanism through which a Health -Promoting School builds school connectedness: inclusive processes and active participation of diverse community members along supportive policies that reflect democratic values. Evaluation score: 12

**Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, 83(3), 357-385.**

*The aim* of the review was to build on previous school climate reviews and refine and focus aspects of school climate associated with five areas for assessment: Safety, relationships, learning and teaching and school, institutional environment and school improvement process. *The method* consisted of a consultation of expert in the field to identify dimensions of school climate and collect recommended literature on school climate date back to 1970. Hand search of the citations of the documents of interest to create a list of resources, cross-examination of relevant citations and a comprehensive search for articles using Google Scholar. *A sample* of 200 references were reviewed. The results are the identification of five dimensions of school climate: safety, relationships, teaching and learning, institutional environment, and the school improvement process. Evaluation score: 10

**Waters, S. K., Cross, D. S., & Runions, K. (2009). Social and ecological structures supporting adolescent connectedness to school: A theoretical model. *Journal of School Health*, 79(11), 516-524.**

*The aim* of the theoretical report was to describe how a school context foster students' feeling of connectedness to school. *The method* involved a systematic review of the literature and the model was developed from the summarized literature. *The sample* was 564 scholarly articles retrieved from seven online databases using nine key phrases. The search was further refined using five inclusion criteria. A total of 51 articles were used in the development of this model. The *results* is a model that assists in the identification of interpersonal and organizational aspects of a school environment that help fulfill the individual's need to feel autonomous, competent and connected. Evaluation score: 13

**Waters, S., Cross, D., & Shaw, T. (2010). Does the nature of schools matter? an exploration of selected school ecology factors on adolescent perceptions of school connectedness. *British Journal of Educational Psychology*, 80(3), 381-402.**

*The aim* of this quantitative study was to identify school-level factors predicting enhanced school connectedness. *The sample* was data from 5 159 grade 8 students from 39 randomly selected schools in Australia. Two type of schools were identified in this research noting that a majority of students attend government funded school but a growing number were enrolling in schools supported by the Catholic Education Office and the Independent Schools Association that charge higher school fees in return for additional resources. *The method* consisted of self-reported measures at two points in time. The *results* indicated that seven school-level variables were associated with school connectedness after controlling for student-level predictors. Evaluation score: 20.

**Feedback.** From a complex system approach, feedback loops can give rise to policy resistance because of a narrow vision regarding the full impact of the actions implemented. When identified, feedbacks become potential points of leverage for change in a system. Within the education system, an ecological approach is often utilized to identify these points of leverage. Waters, Cross and Runions' (2009) model offers improvement to this approach by formulating a new theoretical framework composed of four phases using a combination of Bronfenbrenner's ecological model, Deci and Ryan's Self Determination Theory and Connell and Wellborn's Self System Process model. The authors view

school connectedness as a function of the dynamic interactions between individuals and their social and ecological environment and refers to the extent to which students feel autonomous yet supported, competent in their attempts to relate with adults and peers. Their study also assumes that school connectedness mediates the previously established relationships between school climate and enhanced adolescent outcomes. The authors recommend empirical testing of the model but highlight its potential in shading light onto the relationships between each of the organizational and interpersonal components of school ecology and the students need to feel connected to school. School connectedness is assumed to be helpful for students in mediating the health, social and academic challenges of adolescence. The language of ecological approach seeks to draw attention to the feedbacks between components of a system, using different language than the complex systems language but arriving at similar conclusions. For AP school nurses interested in local actions to promote school connectedness (although the implementation of a new theoretical model for health promotion is an unlikely point of leverage towards improvement) this report offers interesting ideas to consider, in particular the utilization of the Self Determination Theory in building age appropriate activities that seek to stimulate school connectedness as a mediator of the health, social and academic challenges of growing up.

In Langille, Rasic, Kisely, Flowerdew and Cobbett's (2012) study revealing that a higher school connectedness is protective factor for on risks of depression, the authors warn about the importance of assessing the concept in light of cultural differences. Culture, like race and ethnicity, has strong influences on psychological development, values, behaviours and personal relationships. Some of the warnings about their study's limitations point towards potential feedback where students being from a single school in rural Nova Scotia limits the generalizability of the results. Although Ozer 's (2005) results also suggest that perceived school connectedness is a protective factor on adolescent mental health in general, we still have limited understanding of the individual-level characteristics associated with individual perception of school connectedness. Questions remain whether school connectedness

exerts a protective effect on adolescent mental health or whether it is a case where adolescents who are functioning better feel more connected to school. As Langille, Rasic, Kisely, Flowerdew and Cobbett (2012) point out, reported low connectedness to school could be a result of anhedonia associated with depression rather than a cause of depression. Studies into the relationships of genes and depression showed that in 50% of cases, the cause is genetic (Levinson, 2013). Diez Roux (2001) points to Cole's theory of the dynamic relationships between genes and environment, where environmental conditions can affect gene expression. This feedback between genes, depression and environment is important for school nurses who attempt to curb reported depression in youth through the mediating effect of school connectedness as they could face a greater challenge than anticipated.

McNeely, Nonnemaker and Blum's (2002) results revealed that school connectedness is lower in schools with difficult classroom management, suggesting that a layer near the interaction between individual-level and school-level characteristics influences the perceived variable. Also, discipline policies affect the construct as when harsher school disciplines are enforced lesser school connectedness is reported. This might be related to the sense of safety perceived by the students. McNeely, Nonnemaker and Blum (2002) suggest that in seeking to make the school a safer place, zero-tolerance policies in fact lessen the feeling of safety in students. This feedback could point to a side effect or policy resistance and a point of leverage for change within schools from a complex systems approach. Advanced practice school nurses could work with students in identifying school policies affecting their perception of safety and assist them in getting involved within the organizational mechanisms to affect changes in regards to the school policies.

Thapa, Cohen, Guffey and Higgins-D'Alessandro (2013) also reported the importance of race/ethnicity in explaining the variation of school climate perception: according to Watkins and Aber (as cited in Thapa, Cohen, Guffey & Higgins-D'Alessandro, 2013) African American poor female students perceived the racial climate in more negative terms than did white, non-poor, male students.



For example, the review indicates that African American students value teacher-student relationships as the most important dimension of school climate, whereas Latino students regard teacher's fairness, caring, praise of efforts and moral order as the most important. This review highlights the complex interaction of race/ethnicity and age with student's perception of school climate and the feedback loops that can reinforce high level and low levels of perceived connectedness to school according to the types of programs being implemented. Faulkner, Adlaf, Irving, Allison and Dwyer's (2009) study similarly reports that feelings of school disconnectedness is higher in female student who engage in no vigorous physical activities. From these results, school nurses could be tempted to target inactive females with programs aiming at increasing school connectedness but further examination is needed to understand the role of gender on the perception of school connectedness.

McNeely, Nonnemaker and Blum (2002) reported that school connectedness is high in racially segregated schools and lower in integrated schools, but the authors warn about possible undesirable consequences such as unequal distribution of resources that have accompanied school segregation in the past. It seems that even though segregation appears to be beneficial for school connectedness, it is still too much of a taboo to be considered as a potential area of inquiry. Unequal distribution of resources is already occurring with private and public systems of education, and segregation is still present and tacitly approved by neoliberal socioeconomic norms.

In studying school disconnectedness Bonny, Britto, Klostermann, Hornung, Slap (2000) revealed that school connectedness was positively associated with male gender, white race, level of parental education, suburban schools, better academic performance, and more extracurricular involvement. The authors urge the knowledge users to consider the population of students who did not complete the survey in evaluating the results of their study. They suggest that survey's nonrespondents are more likely to be poorly connected to their school. Also, since students reporting lower school connectedness scores also report more frequent nurses visits, school nurses may be an excellent source

for identifying disconnected youth and seeking to understand the organizational barriers to school connectedness.

***Dependencies.*** Dependencies between individuals are characteristics of population health and systems approach that could be useful for school nurses to see the intricate web of social connections surrounding youth and its impact on their health. Within Thapa, Cohen, Guffey and Higgins-D'Alessandro's (2013) review, school climate relates to the patterns of people's experience of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures. It is believed that a positive school climate fosters youth development for a productive, contributive, and satisfying life in a democratic society. The concept of school connectedness emerged within two dimensions of school climate: Relationships and Institutional Environment. Relationships to teachers, relationship to self and to others were reported as foundational. The most important aspect of relationship is described as how connected people feel to one another. Perceptions of safe, fair and supportive relationships with teachers were associated with lower behavioural problems. It was also reported that teachers' work environment is an important aspect of school climate whereas positive adult to adult relationships are critical for the foundation of a positive school climate. This highlights the presence of dependencies between individuals within the school system and leads to further questions concerning the occupational health in schools as an adult workplace.

McNeely and Falci's study (2004) also distinguished between various dimensions of school connectedness in relation to the initiation of health risk behaviours. The results revealed that unlike teacher support, social belonging does not protect against the initiation of any of the health risk-behaviours being measured. These findings stimulated deeper inquiry into the literature surrounding belonging and connectedness, revealing various types of connections including: conventional connections of individuals who engage in prosocial behaviours and regulate prosocial behaviours in

others, and unconventional connections of individuals who engage in behaviours that do not conform to social norms. Carter, McGee, Taylor and Williams' (2007) analysis also revealed that school engagement, in comparison with connections to family and friends, showed the strongest association across both health promoting and health compromising behaviours. Also, that connections to friends was associated with increased health-compromising behaviours.

Black, Grenard, Sussman and Rohrbach's (2010) findings corroborate that mentoring relationships reduce adolescent risk behaviours by engaging youth in prosocial activities and conventional relationships and that in particular natural mentors may enhance positive experience of schools. Adults in school work in a variety of roles such as teachers, coaches, counsellors, nurses and other staff. Mentors are non-parent adults in an adolescent's life who can help shape health-promoting behaviours. Two type of mentoring are recognized, formal and natural. The natural type, occurring without the help of schools or outside agencies such as Big Brothers Big Sisters, is believed to be most important because the bonds formed naturally out of similar interests last longer and occur more frequently than formal ones (Black, Grenard, Sussman & Rohrbach, 2010). Modeling or observational learning is a key tenets of Bandura's social learning theory but research from Christakis and Fowler (2007) using network analysis to look at the spread of obesity through social ties contend that psychosocial mechanisms of the spread rely less on behaviour imitation than a change in an ego's general perception of the social norms, wherein a person may observe that another gains weight and then may accept weight gain in themselves. From a social cognitive theory (Bandura, 2004) perspective health behaviours are affected by the outcomes they produce. The social approval and disapproval of one's actions is a major determinant of behaviour. Many assumptions seem to underlie mechanisms of behaviour imitation and perception of social norms, never-the-less cautions should be taken in regards to the long-term consequences and moral implications of attempting to control health behaviours by surrounding our youths with *healthy* mentors conforming to social norms that are at the roots of

discriminations.

***Macro-level Patterns.*** Macro-level patterns emerging from the interplay of factors at different levels within and outside the schools are revealed by Black, Grenard, Sussman and Rohrbach's (2010) invitation to look at mentoring relationships for adolescents and their impact on risk behaviours. The presence of agencies such as Big Brothers Big Sisters or the Boys and Girls Club in their study bring together non-parental adults with various interests in the school and increase the chances of forming formal mentoring relationships that promotes the adoption of health promoting behaviours in adolescents. This widening of the school-community to include outside agencies can stimulate curiosity into the operating mechanisms supporting them. For example, The Boys and Girls Clubs of Victoria are supported by their foundation, a non-profit organization registered with the Canada Revenue Agency as a charity, that seeks to enhance the quality of life in the community through various programs. In some instances, the Clubs are already associated with schools by the provision of after school care and could be sought out by school nurses to deepen the connections to the school community by promoting their programs aiming at parent's education to support students academic skills.

Grounded in an ecological framework, Waters, Cross and Shaw's (2010) study has identified several organizational characteristics such as structural, functional and the built environment that influence school connectedness. Structural characteristics include school size and number of year levels and school neighbourhood. The functional characteristics relate to the intangibles such as policies and procedures, academic and behavioural expectations, student involvement in decision-making and extra curricular activities. This Australian study points to the lack of knowledge regarding the relationship between health and the built environment, and points to areas for further research such the link between fewer gardens and open space with more graffiti and the variable depression. Thapa, Cohen, Guffey and Higgins-D'Alessandro (2013) also reviewed the institutional environment dimension of school climate. The results support smaller school sizes in order to increase school connectedness based on

McNeely et al.'s (2002) findings about the negative correlation between school size and school connectedness.

Waters, Cross and Shaw's (2010) study integrates elements of developmental health theories, such as Bronfenbrenner's, which demonstrate how an individual interacts within a context to satisfy their needs for autonomy, competency and relatedness; and the importance of a fit between the developing needs of the adolescent and the contextual or environmental opportunities to meet those needs. This study suggested that school connectedness relate to the individual's need to belong, and is perceived along a continuum from simply belonging or participating through a more complex definition including behavioural, cognitive and emotional domains. The stage-environment fit theory used in the analysis of the data from Add Health suggests that behaviours, motivation, and mental health are influenced by the fit between the developmental stage of the adolescent and the characteristics of the school environment (McNeely, Nonnemaker & Blum, 2002). The authors suggest that school connectedness is maximized if the social environment meets the core development needs of the adolescent. This suggestion assumes the presence of macro-level patterns from which complex systems approach can help understand the processes of interactions between levels of organization. This study also suggests that on some occasions, a healthy school environment is more important than classroom health education in promoting health.

In Resnick, Bearman, Blum, Bauman, Harris and Jones (1997) school connectedness as an independent variable was derived from a resiliency framework which posit that adolescents' vulnerability to health compromising outcomes is affected by the nature and number of stressors as well as the presence of protective factors that mediate those stressors. Adverse or successful outcomes are described as emanating from the interplay of environmental factors, familial factors, and individual characteristics (Resnick et al., 1997). Although this description of the mechanisms at play reflect an approach akin to complexity science without specifically naming it, the study suggests that school

connectedness is a concept that emerges from the interaction of the individual with the school environment but measures it from an individual perspective where the student feels that the teachers treat students fairly, feels close to the people at school and feels part of their school. According to this study, school connectedness appears to be an individual perceived protective factor mediating the effect of stressors in an adolescent's life where negative and positive health outcomes are the results of the interplay of factors at various levels of organization.

Waters, Cross and Shaw's (2010) study measurement included Pastoral Care as a functional characteristic of the organization. It reported that pastoral care strategies had less to do with religion and were more oriented towards engaging students in meeting their needs which includes promoting health and wellbeing, building resilience, enhancing academic care and promoting social capital. This is congruent with Azagba and Asbridge's (2012) recommendations for social competence training for students. Pastoral Care along with school size and average academic performance were cited as the most significant school-level variable in influencing school connectedness. The authors recommend that more studies should control for school-level variables and expand research over a two year span to include questions relating to the why and how transition to secondary school can predict present and future school connectedness score. It is also suggested that further research should particularly consider the nested structure of the construct of school connectedness within the schools as a school-level variable whereas school connectedness might be perceived differently according to levels of resources available through public and private funding. The study's use of an ecological framework to view the construct is useful in capturing the school-level patterns influencing school connectedness and thus pointing to the development of system wide programs to influence changes that could mediate inequities between students. Unfortunately, it seems as if the measurement of the construct does not reflect appropriately the Self determination Theory on which the study was partly grounded and even though the Add Health Survey is an instrument with an acceptable level of validity, the questions asked

barely relate to the student's need for autonomy and competences.

Rowe, Stewart and Patterson (2007) argue that the Health Promoting School (HPS) approach has the potential to increase school connectedness through two mechanisms: processes and structures. The authors defined the construct as the quality of the social bonds, or cohesiveness between diverse groups within the school community including student, families, school staff and wider community. The authors also relate the construct to social capital where strong social bonds are characterized by a high level of trust and the norms of reciprocity. This reflects an ecological perspective of a school system where individuals do not possess school connectedness but rather school connectedness reflects a structural feature of the school system. School connectedness is believed to be protective of mental and emotional well-being and to mitigate against individual health risk-taking behaviours such as substance use and violence. The authors suggest that the model offers health practitioners practical strategies by explicating the mechanisms by which HPS can build school connectedness. The study reports Markham and Aveyard's finding (as cited in Rowe, Stewart, & Patterson, 2007) explicating that a weakening of the boundaries between school and the community results in the convergence of values, beliefs and interests that allows those "alienated or detached" to feel increased connection to the school community. This theory has been supported by findings that incongruences between home and school culture can contribute to the low achievement of students from diverse cultural backgrounds. This suggests that inequities could be minimized by the process of promoting school connectedness within the larger school community as a structural feature of the school system. Within the three areas of Health Promoting Schools: curriculum, teaching and learning; school organization, ethos and environment; and partnerships and services, the last aspect of the framework has been argued as the most essential component of health promotion through working collaboratively at developing social capital networks with the wider school-community such as health services provided by school nurses. This framework can help school nurses identify the economical, political, social and cultural factors

that impact the development of school connectedness.

Chapman, Buckley, Sheehan and Shochet's (2013) review considers the school connectedness to be modifiable as it has been found to vary according to intervention programs. The review revealed that despite the assumption that increased school connectedness would reduce risk taking behaviours, most studies reported a mix of significant and insignificant results in risk behaviour change. According to the authors, this could be explained by the evidence that risk-taking increases from early adolescence to mid-adolescence at a time when school connectedness decreases. Greater insights would be gained from incorporating mediation analysis to assess the theoretical pathway of prevention. The authors conclude that while their study confirms the positive impacts of multicomponent programs on school connectedness and reduced risk-taking behaviours, future research should assess the different impact of various program components to determine the complexity of interventions required to result in positive changes.

In Canada, Azagba and Asbridge's (2013) study results demonstrate a strong protective effect was observed between school connectedness and smoking susceptibility. The authors made recommendations that school-based prevention programs targeting school connectedness may be effective. The authors pointed to examples in a US study where intervention measures such as teacher training in classroom instruction and management, social competencies training for students and parents education to support student's academic skills were associated with increased school connectedness. Although the authors assert that these interventions are amenable to change at the school level, school curriculum, teacher training and parental education seem to be organized at different levels of the school system.

**Discussion.** As Chapman, Buckley, Sheehan and Shochet's (2013), review revealed, the construct of school connectedness still lacks consistency in definition and measurement 10 years after the Wingspread Declaration (2004). Knowledge is emerging in regards to the impact of school



connectedness on health of students, although most of the studies are cross-sectional in nature and therefore cannot explicate the causal relationships of the various dimensions of the construct, and health-promoting and health-compromising behaviours. The better evidences about School Connectedness are pointing to its mediating effects on the health, social and academic challenges of adolescence, but few mediation analysis are testing this assumption. This integrative review's attempt to clarify the construct departed from the assumption that school connectedness is the belief, by students, that adults in the school care about them (Wingspread, 2003). It relates to the individual need to belong and is perceived along a continuum from simply belonging or participating through a more complex definition including behavioural, cognitive and emotional domains. (Waters, Cross & Shaw, 2010). Although most studies use individual measures of the construct in terms of perception of happiness, belonging, safety, closeness, and fair treatment by teachers, the construct is understood as an outcome of school climate and seems to be viewed as the perception of the relationships between people, and influenced by individual-level and school-level factors.

Some authors view the construct as social capital of the school community and “the new way to of doing business” (Preece, 2009, p. 23). For critics of social capital, to discuss school connectedness through the language of economics has the risk of interpreting the school system as producer of social-capitalists (Navarro, 2002). According to Hirschi's social control theory, bonds to people or institutions promote conformity and act as inhibitor to delinquent or risky behaviours (as cited in Chapman, Buckley, Sheehan & Shochet, 2013). Moreover, proponents of an ecological lens to view the school community report Markham and Aveyard's finding (as cited in Rowe, Stewart, & Patterson, 2007) that incongruence between home and school culture can contribute to the low achievement of students from diverse cultural backgrounds and that promoting school connectedness through a weakening of the boundaries between school and the community can results in the convergence of values, beliefs and interests that allows those “alienated or detached” to feel increase connection to the school community.

In terms of social capital, school connectedness has the dangerous potential of transforming schools into agent for the acculturation and assimilation of immigrants and linguistic minorities into the dominant socio/politico/economic culture.

Inconsistencies in definition and measurement do not prevent the development and implementation of school-based programs seeking to increase school connectedness since it has been associated with lower levels of health risk behaviours. Also, higher perception of school connectedness have been reported by white males from educated families and involved in extracurricular activities. Inquiries into school connectedness as a mediator of health, social and academic stressors on adolescence health could benefit from turning the gaze away from the obvious and paying attention to the elephant in the room- what are some of the unanticipated effects on health disparities that could arise from promoting school connectedness?

A complex systems approach can be used to see feedback loops such as the reinforcing effect between physical activity behaviours and environment. People sharing certain norms, cultural values and similar incomes are more likely to live in similar environments where they can maintain health promoting behaviours. Dependancies between individuals are important for youth whose parental socioeconomic circumstances shape their exposure to peer groups which could affect their educational and health outcomes through social influences (Diez Roux, 2006). Finally, macro-level patterns emerging from the interplay of factors at different levels such as the school neighbourhood's structural and social environments by race-ethnicity and socioeconomic status, and the presence (or absence) of health-promoting services and resources can affect health disparities in youth. Advanced practice school nurses can minimize disparities by advocating for upstream interventions, distant in space, to minimize health disparity for this population. One of the fundamental errors that school nurses can do is to attribute the health risk behaviours to the youth's disposition rather than situation. Sterman (2006) assert that although the power of a system in shaping someone's life does not excuse personal

responsibility for behaviour, a complex systems lens enables health professionals to focus attention and efforts where “ordinary people can achieve extraordinary results” (p. 510).

**Limitations.** There were several limitations to this review. The results of this review need to be considered through, first and foremost, the inexperience of the only reviewer. Second, like in most studies, time and financial constraints affected the process of a review. Third, the decision to limit the electronic search to subject terms “health promotion” and “community health” to keep the scope of the review manageable, excluded citations that may have been useful to clarify the concept of school connectedness for school nurses. This limitation was hopefully offset by the decision to incorporate an ancestry search as a method and to include systematic reviews, foundational quantitative studies and theoretical papers in the review. In regards to subject terms used for electronic search, this author recognizes the possibility of publication bias. Search engines may have rendered the task of searching for literature time efficient, but seekers and reviewers need to keep in mind that computer programs are not smart engine and tend to default. One example of this is that when using multiple search engines and multiple subject terms through EBSCO host, the selection “subject terms” (SU) to specify the location in the citation (All text, author, title, abstract) where to search for the term can yield limited results since this function has not been programmed accurately yet. One recommendation this author makes in an attempt to clarify the construct for knowledge user is to create a “heading” for school connectedness within EBSCO host from which all citation pertaining to this topic could be tagged as such and retrieved more efficiently and consistently. Fourth, this project reviewed a few citations from common authors and data sources that could have yield to overconfidence in and biased results.

Finally, the integrative review is one part of a larger project submitted in partial fulfillment of the requirements for the degree of Masters in Nursing. The aim of the greater project was to synthesis experiences from the process of becoming an advanced practice nurse, demonstrate the acquired knowledge and critical thinking skills, and guide current and future practice as an advanced practice

school nurse.

### **A Bold Theory of Advanced Practice Nursing Role Development**

- “Would you like some more of this respectable wine?” Jean asked as we were relaxing together the evening the kids had left the house. “Yes please,” I said. “Maybe the real project of graduate nursing school is advanced drinking practice.” I said, laughing and raising my glass. “A colleague of mine confessed that nursing school brought her to drinking wine everyday and almost destroyed her marriage... and her story is not unique... talk about mentors for prosocial behaviours, who are we kidding?” I asked.

-“How did the meeting with the principal go?” Jean asked after pouring wine and inviting me to sit down on his new red couch by the gas fire place. “Okay” I was still trying to make sense of the meeting in light of the last few months facilitating the creation of the student health committee. I had met with the students to organize an event to promote the committee and introduce our Healthy Schools initiative. The team wanted to engage the whole school into an Amazing Race and recruit new members for the health committee. I had applied for funding through Physical and Health Education Canada and received a grant for the event. We were meeting sometimes twice a week at the school during lunch hours. The lead for the committee was an aspiring young nurse. As an engaged youth, he was also involved in other committees and his attention was wooed in many directions.

-“Just Okay?” asked Jean, bringing me back to the moment. “Actually, not so great. The president of the parents' association and the principal wanted to met with me in regard to concerns that some members of the parents committee brought forward after the last meeting.” I said, leaning back into the couch and looking down at my wine. Jean drew closer with an inquisitive look on his face.

- “It seems that there could be conflicts of interest because of my functions in both committees. I think they asked me to choose between the parents health committee or the students health committee.” I explained. “I am sorry to hear that...” Jean gently touched my knee with his wooden boatbuilder's

hands. I knew he was working with his impulse to restore my spirit and I appreciated the respectful place he left for my grieving process. I was replaying the meeting in my head and trying to make sense of it. “What are you going to do?” Jean asked a few moment later while I was emptying my glass of wine. “I need some time to contemplate and make sense of the future development of this advanced practice school nurse role...” I said. “I have been involved in adults committees such as the Provincial Health Network for 5 years and it was useful in enabling my participation to conferences and building relationships with people with decision-making power but I am a little disenchanted about the positive health outcomes for the students. For example, the Provincial Network's project to translate the Student Health Guidebook is not even used at the school, what was that about... not to mention that it does not pay my rent, sitting in those committees.” I said. I was starting to feel the burn from volunteering, so was the student lead from the health committee, I could tell from his frantic look during our meetings. Could there be something like youth engagement burnout? “You still want to be a school nurse when you grow up, eh?” Jean said in closure. The evening was mild. We decided that our time together would be better spent going out for a walk in the spring air, holding hands and talking about nothing.

In the USA, school nursing is a recognized specialty practice that provides expertise for the delivery of health services and development of health policies and programs within school-based health centres (NASN, 2013). At this time in Canada, the roles of the nurse practitioners (NP) and the clinical nurse specialist (CNS) have evolved to meet the health needs of individuals, families, groups, communities and populations. Schober and Affara affirm that advanced nursing practice has evolved to optimize nurses' contribution to health by expanding their role (as cited in CNA 2008). According to the Canadian Nurses Association's position statement, the CNS is an RN with a master's or doctoral degree in nursing and has expertise in a clinical nursing specialty. CNA recognizes 20 specialties/areas of nursing practice. Without a recognized speciality of their own, school nurses often associate with Community Health Nurses of Canada (CHNC) which recognizes schools as a place of practice for

nurses to promote school health.

In British Columbia, school health promotion operates through the Comprehensive School Health (CSH) approach and is championed by Healthy School BC, a partnership between The Directorate of Agencies for School Health (DASH) and the Ministries for Health and Education. DASH BC is a not-for-profit society established in 1983 and incorporated in 1991 to lobby for a health curriculum in schools (DASH BC, 2013). Healthy Schools programs were implemented in Victoria during 1992 and part-time School Coordinators were established in 1993 to support school projects. In 1993, the responsibilities for Healthy Schools were transferred to the Ministry of Children and Families and DASH developed a new mission focussing on the CSH model while establishing new partnerships and creating new educational resources with Heart Smart Kids, Heart and Stroke Foundations, Making Decisions, and Alcohol and Drug Education Services.

The movement for healthier schools was growing across Canada as well. The Pan-Canadian Joint Consortium for School Health (JCSH) was created to coordinate efforts at the federal, provincial and territorial level in three key areas: knowledge development, leadership and capacity building. Without offering direct health programs to the population, the JCSH promotes health resources in both official languages. In BC, representatives from the Ministry of Health and Ministry of Education today occupy the School Health Coordinators role in BC. As a leader in School Health, DASH BC coordinates strategies for the province's health promotion plan Healthy Families BC. The Healthy Schools Network, Action School! BC and Healthy Schools BC are some of the avenues available in English for the school-community stakeholders to utilize and make their schools healthier. When resources permits, public/community health nurses of BC visit the schools within their district and promote the usage of the Comprehensive School Health Approach.

The Comprehensive School Health approach, also referred to by Health Promoting Schools and Coordinated School Health is an approach to health promotion derived from the Ottawa Charter and is

adopted in 43 countries around the world (Veugelers & Schwartz, 2000). The CSH approach is organized in four pillars: teaching and learning, social and physical environment, healthy school policy and partnerships and services. Coordination of activities within the four pillars is required to implement the CSH approach. Veugelers and Schwartz (2000) believe that this approach is promising to promote Healthy Eating and Active Living (HEAL). In BC, Healthy Schools BC has developed four areas of programs and resources that relate to the pillars of the CSH: Active Living, Healthy Eating, Healthy Practices and Healthy Relationships. Active Living and Healthy Eating activities are a well supported area of health promotion practices through Action School! BC. Diversity and Equity, Positive Mental Health, Anti-Bullying and School Connectedness are aspects addressed through programs within the Healthy Relationships pillar. A total of 62 programs and supports to promote school connectedness are listed on the Healthy Schools BC's website where 822 members are registered.

- "How was your flight?" I asked Jean after he returned from a field trip for a boat assessment. "Beautiful and calm, not a cloud in the sky. How is your project going?" he said. "Pretty good, I spent a few hours on Saturday with Joanne to edit the paper. Going over it word by word and explicating it to an outsider helps me articulate a personal framework for advancing my practice as a school nurse, and it continues to evolve even as I am telling you this since more ideas are emerging..." I said, "Would you like to hear more about my theory?" I continued. "Sounds like a date with my favourite scholar-practitioner" Jean said, full of enthusiasm. "Advanced practice school nurse." I emphasized. "What makes it advanced practice? He asked. "Well, being able to articulate the philosophical and theoretical inspirations of my practice, apply scholarly thinking in practice, continue tinkering my practice informed by emerging ideas that become open, dynamic and contextual foundations for evolving practice." I explained.

- "Guerrilla theorizing you are!" Jean said with his best Yoda imitation.

- "I think so," pausing for a moment. "I have been keeping my eyes on the Community Health Nurses of Canada's website and the Community Health Nurses Initiatives Group's (2013) School Health Committee has produced a document regarding the roles, responsibilities and scope of practice for school-based public health nurses. This means that there is interests and momentum within the CHNC, I might join a working group to plan the next conference and advocate for a special interest group in BC or something".

Salyer and Hamric (2009) have identified patterns in the evolution of specialty to advanced the practice of nursing. Moving along four stages of evolution, it is possible for the role to develop in more than one stage simultaneously but the authors advocate for a deliberate and logical planning strategy and warn that controversial issues must be addressed before and during the process.

- "Well, you have not step back from volunteering for very long" Jean said laughing. "I know, I know, but Neomodernism reflects a philosophy of science that is actively engaged with the practice arena and it does not specify whether practice is payed practice or not... I have decided to let go of my position with the Parent Health Committee and focus on the Student Health Committee. I would like to expand my inquiry into the construct of School Connectedness with the students by organizing a Zine making workshop about what it means for them." I said. Jean was looking at me in disbelief.

- "Did you not learn enough about School Connectedness with the Integrative Review?" he asked. "Enough to know what questions to ask next" I said. "I want to collaborate with students in aesthetic knowledge development for the co-production of contextual nursing knowledge to inform my practice." I explained. "One of the thing that I learned was that with a higher-level construct such as School Connectedness, I better start from the ground-up to develop knowledge applicable to practice." I said. "I intend on working on a proposal for a project over the summer and bring it to the Whole School Committee in September." I said. "I think the project could also involve an analysis of the data from the Youth Smoking Survey done at the school last year, as a baseline for measuring levels of



school connectedness and maybe lead to the elaboration of a strategic plan for implementation and developmental evaluation of a *culture* promoting School Connectedness... and by the way, I registered for the 8<sup>th</sup> Annual Healthy Schools Leadership Symposium in May. Would you like to spend the weekend in Vancouver with me?" I asked, knowing that Jean would be delighted. "In May, that would be great, we could stay at the Sylvia in English Bay and stroll around Granville Island." he said.

Brykczynski (2009) asserts that "professional role development is a dynamic, ongoing process that, once begun, spans a lifetime." (p. 95). The school nurse specialty is not an advanced practice role recognized in Canada, yet. Models and frameworks have been proposed by many nurse-scholars to advance the practice (Hamric, Spross & Hanson, 2009) and Kincheloe's (2005) bricolage combined with Reed's (2008) Guerilla Theorist enable creative liberties to inform ideas that project a tentative framework to guide the advancement of this school nurse's practice:

- Connect with other nurses interested in school health through communities of practice
- Further education by subscribing to peer reviewed literature about school health and attend conferences
- Maintain literacy skills by reading and blogging about neomodernism
- Self-publish or perish
- Make Zines
- Volunteer at the school
- Learn to play guitar, read poetry and bricolage more
- Dream about Neomodernism as a PhD candidate

Bricolage as a tool for a new empiricism grounded in Neomodernism, enables handypeople to produce contextual knowledge and local truths to inform the pursuit of what is good, emancipatory and healthful.

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## Appendix A Quantitative Data Evaluation Framework

Title	
Author(s)	
Year	
Publication	
Database	
Language	
Country of origin	

*Allocate 1 point per answerable question for a total of 30 points*

**Problem statement and purpose**

1. What is the problem statement or purpose of the study		
2. Does the problem statement express a relationship between 2 or more variables? If so, what is the relationship? Is it testable?		
3. Does the problem statement specify the nature of the population being studied? What is it?		
4. What is the significance of the problem-if any-has the investigator identify?		

**Review of the literature and theoretical framework**

5. What concepts are included in the review? Independent and dependent variables, how are they conceptually defined?		
6. What gap or conflicts in knowledge of the problem are identified? How is this study intended to fill those gaps		
7. Are the references cited mostly primary?		
8. What are the operational definitions of the independent and dependent variables? Do they reflect the conceptual definitions?		

**Hypotheses or research questions**

9. What hypotheses or research questions are stated in the study? Are they appropriately stated?		
10. What are the independent and dependent variables in the statement of each hypothesis or research question?		

**Sample**

11. What type of sampling method is used in the study? Is it appropriate to the design?		
12. Does the sample appropriately reflect the population as identified in the problem or purpose statement?		
13. To what population may the finding be generalized? What are the limitations in the generalizability?		

**Research design**

14. What is the rationale for the design classification?		
15. Does the design seem to flow from the proposed research problem, theoretical framework, literature review and hypothesis?		

**Internal validity**

16. Does the design have controls at an acceptable level for the threats to internal validity?		
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**External validity**

17. What are the limits to generalizability in terms of external validity?		
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**Research approach**

18. Does the research fit with the purpose of the study?		
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**Methods**

19. What data collection methods are used in the study?		
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**Legal-ethical issues**

20. Have the rights of the subjects been protected? How?		
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**Instruments**

21a. <b>Physiological measurement:</b> Is a rationale given for why a particular instrument or method was selected? If so, what is it?		
21b. <b>Observational methods:</b> Who did the observing?		
21c. <b>Interviews:</b> Who were the interviewers? How were they trained to minimize bias?		
21d. <b>Questionnaires:</b> What is the type or format of questionnaire? Are they consistent with conceptual definitions?		
21e. <b>Available data and records:</b> Are the records that were used appropriate to the problem studied?		

**Reliability and validity**

22. What type of reliability and validity is reported for each instrument?		
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**Analysis of data**

23. What level of measurement is used to measure each of the major variables?		
24. What descriptive or inferential statistics are reported?		

**Conclusion, implications and recommendations**

25. Are the results interpreted in the context of the problem or purpose, hypothesis, and theoretical framework and literature review?		
26. What does the investigator identify as possible limitations or problem in the study related to the design, methods, and sample?		
27. What recommendations for future research are stated or implied		

**Applications and utilization for nursing practice**

28. Does the study appear to be valid? In other words, do its strengths outweigh its weaknesses?		
29. Is direct application of the research findings feasible in terms of time, effort, money, and legal-ethical risks?		
30. Should these results be applied to nursing practice?		

**Comments**



## Appendix B Theoretical Data Evaluation Framework

Title	
Author(s)	
Year	
Publication	
Database	
Language	
Country of origin	

*Allocate 1 point per answerable question for a total of 30 points*

**How clear is the theory?**

*Semantic Clarity*

1. Are the major concepts clearly defined?		
2. Are coined words clearly defined?		
3. Is the amount of explanation appropriate and useful?		

*Semantic Consistency*

4. Are definitions consistent with one another?		
5. Are the same term defined similarly?		
6. Is the view of the person and environment compatible?		
7. Are words borrowed from other disciplines and used similarly in this context?		
8. Are assumptions and purposes compatible with other elements in the theory?		

*Structural Clarity*

9. Do all relationships fit within the structure of the theory?		
10. Can the order of the theory be comprehended?		

*Structural Consistency*

11. Do diagrams and visual structures provide support with one another?		
12. Are compatible and coherent structures suggested for the different parts of the theory?		
13. Does the sequence of presentation support clarity?		

**How simple is the theory?**

14. Are the amounts of relationships contained within the theory reasonable and organized?		
15. Are the amounts of concepts contained within the theory reasonable and organized?		
16. Is the theory consistently simple?		
17. Does the theory tend to described, explain or predict? Impart understanding? Create meaning?		

**How general is the theory?**

18. How specific are the purposes of the theory?		
19. Is this theory specific to nursing practice areas?		
20. How broad are the concepts within the theory?		

**How accessible is this theory?**

21. Do the definitions provided for the concepts adequately reflect their meaning?		
22. Are they within the realm of nursing?		
23. Are the depths of the concepts consistent with the depths of the definitions?		

**How important is this theory?**

24. Does the theory have the potential to influence nursing education, research, practice?		
25. Do the purposes provide a general framework within which to act or a means to predict phenomena?		
26. Is the theory's position consistent with nursing philosophy?		
27. Are the purposes important to nursing? Why?		
28. Will application of this theory resolve any important issues in nursing?		
29. Is the theory futurist and forward-looking?		
30. Do I like this theory? Why?		

**Comments**


This data evaluation tool was developed by Dominique Duquette using:  
Chinn, P., & Kramer, M. (2008). *Theory and Nursing: Integrated Knowledge Development* (7th ed.). St Louis, MO: Mosby.

### Appendix C Review Data Evaluation Framework

Title	
Author(s)	
Year	
Publication	
Database	
Language	
Country of origin	

*Allocate 2 point per answerable question for a total of 30 points*

1. Does it address a a focus research question/purpose?	
2. What gaps or inconsistencies in knowledge does the literature review uncover?	
3. How does the review reflect critical thinking?	
4. Was a thorough search done of the appropriate databases and were other potentially important sources explored?	
5. Does it address publication bias?	
6. Are primary sources mainly used?	
7. Are both conceptual literature and data-based literature included?	
8. Does it include specific inclusion and exclusion criteria for judging the studies?	
9. Is a written summary of the reviewed scholarly literature provided?	
10. Does the summary of each reviewed study reflect the essential components of the study design?	
11. Are all the relevant concepts and variables included in the review?	
12. Does the critique of each reviewed study include the strengths, weaknesses, or limitation of the design; conflicts, and gaps or inconsistencies in information related to the area of interest?	
13. Does the synthesis summary follow a logical sequence that leads the reader to the reasons why a particular research or non research project is needed?	
14. Does the organization of the reviewed studies flow logically, enhancing the reader's ability to evaluate the need for a particular research or non research project	
15. Does the literature review follow the question/purpose^	

Comments


This data evaluation tool was developed by Dominique Duquette using:  
Lobiondo-Wood, G., & Haber, J. (2009). *Nursing Research in Canada; Methods and Critical Appraisal for Evidence-Based Practice*. p. 108, 242. Toronto: Mosby Elsevier.

Appendix D  
Zine of Found Poem

# Plethora

Issue #1

Found Poetry As  
Literature Review

LazyRobin Press

<p><b>Youth At Risk</b></p> <p>Violence stigmatized, distress</p> <p>Suicidal absenteeism, delinquency</p> <p>Pregnancy</p> <p>Youth at risk for adverse outcomes</p> <p>Public awareness primary and secondary</p> <p>Students help students; improved school bonding</p> <p>Submitted survey</p> <p>« I am happy to be at this school »</p> <p>Logistic regression and simple correlation</p> <p>The sample was not stratified by gender</p> <p>Results</p> <p>Boys, white, feeling more connected</p> <p>Complex difference in nature of associations</p> <p>Contrast perhaps</p> <p>School connectedness is indeed malleable</p> <p>Still unclear?</p> <p>Youth at risk</p>	<p>Bonny, A. E., Britto, M. T., Klostermann, B. K., Hornung, R. W., &amp; Slap, G. B. (2000). School disconnectedness: Identifying adolescents at risk. <i>Pediatrics, 106</i>(6), 1017-1021.</p>
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<p><b>A literature review</b> is a systematic method of exploration, evaluation and summarization of research about a phenomenon of interest .</p> <p>As an art-based approach to literature review, Found Poetry can yield to important and otherwise invisible insights during an inquiry (Butler-Kisber, 2002).</p> <p>Prendergast (2006) expressed her views on the thoughts and words of others through a re-creation of their texts. In her doctoral dissertation, she inserted these poems as interludes between the chapters.</p> <p>Found Poetry was used as an alternate mode of understanding and representing evidences in her inquiry.</p> <p>In this project, an aesthetic lens was used the review some of the articles retrieved for an Integrated Review.</p> <p>Words were extracted while the surrounding text was blacked out to recreate meaning about the concept of School Connectedness.</p> <p>The intention is to evoke an emotional response to the empirical and theoretical data and stimulate multiple ways of getting to know the concept.</p>	<p>Butler-Kisber, L. (2002). Artful Portrayals in qualitative inquiry: The road to found poetry and beyond. <i>Alberta Journal of Educational Research, XLVIII</i>(3), 229-239.</p> <p>Prendergast, M. (2006). Found Poetry as Literature Review : Research Poems on Audience and Performance. <i>Qualitative Inquiry, 12</i>, 369-388.</p>
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