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RESEARCH EXCHANGE**

**Learning How to Learn
in an Information Age**

Linda Nosbush

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Understanding how we learn in an information age is critical to our advancement as a society for it is only when we understand the process that we will be able to maximize that learning by applying it strategically to improve the quality of life for all.

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Finally, to the many people who shared their hopes and dreams for the future through their stories, their writing and their pain, I thank you for your willingness to work with me as we envision a brighter future where all can thrive.

Dedication

This study is dedicated to those

Who willingly shared their learning processes – children, families, graduate students, professional colleagues and community members

And

Those who envisioned a future where we could

Truly live, love, learn and discover our human being in the shelter of each other.

We know that we have promises to keep now that you have shown us how we use wisdom, experience, and research to learn about ourselves, others and the world.

We will keep those promises by developing a society that learns how to nurture its people and use the latest technologies to create a life worth living.



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About the Author



Linda Nosbush was born and raised in Saskatchewan and attended high school at St. Ursula's Academy in Bruno. She, her husband, and two children, Daniela and Jonathan, spent almost twenty years in Alberta (ten in Calgary and seven in Edmonton), as well as a couple of years in Minneapolis while Linda went to graduate school, before returning to Saskatchewan in 1989. Linda taught music in Saskatchewan, was a classroom teacher and consultant in Alberta, and has taught at the Universities of Calgary, Minnesota, Alberta and Saskatchewan in the areas of literacy, early childhood education, literacy, special education and research.

Linda was responsible for literacy, libraries and early childhood programs in the Saskatchewan Rivers School Division before she assumed the role of Community Research Coordinator for the National Understanding the Early Years Initiative. With the support of the community she has written the Crime Reduction Strategy, the Addictions and Substance Abuse Strategy, including a framework and number of background documents, an Early Childhood Development Framework, and a Report on the Prince Albert Summit and Survey. She is presently working on a research project exploring female gang membership with the Youth Activity Centre and National Crime Prevention.

During the Understanding the Early Years Initiative Linda was privileged to spend a year and half at the Prince Albert Police Service as she explored the roots of criminogenic involvement. Later this year, Linda will receive the first Police Services Citizen Effort Award for her work in helping the police service identify and address root causes of crime. She continues to work with the police service.

Linda also began and coordinates the Human Services Integrated Practicum in Prince Albert, working closely with colleagues in the Colleges of Nursing, Pharmacy and Nutrition, and Medicine at the University of Saskatchewan to continue to evolve understanding of interprofessional learning and development. In the city of Prince Albert, she is part of the committees on Policy Planning and Race Relations and Social Issues. She is also a member of the Board of Directors for the YWCA.

In the field of education, Linda chairs the Early Learning and Child Care Ministerial Advisory Board for the Minister of Learning. She is a fellow of the national Council for Early Child Development and sits on the citizen's advisory board for the Centre of Excellence for Early Child Development at the University of Montreal, where she represents the Canadian Association for Community Education.

She has been the Coordinator of Christian Initiation for Adults in her parish of St. Joseph's for many years, and she sings with the Watsonairs, the German Choir and the Diocesan Choirs in Prince Albert. In 2005 she was awarded the YWCA Woman of Distinction Award for Community Enhancement and the Citizen of the Month by Rawlco Radio. Linda has also worked with the Food Coalition in Prince Albert to develop Prince Albert's Food Charter, the third of its kind in Canada, and she is a member of the Prince Albert and Area Safe Community, which is focused on injury prevention.

Linda's passion for children and her community is evident in her work as a researcher, teacher, consultant, university lecturer, church member, and community member. She remains committed to evolving an understanding of the ecology of human development. She knows that alone we can go fast, but it is together that we go far!

About the Research Context



Prince Albert is the third largest city in Saskatchewan and is situated in north central Saskatchewan at the juncture between the grasslands and the boreal forest. It functions as both the gateway to the north and south.

Prince Albert's main industries include forestry, a thriving service industry, agriculture, and a growing mining industry in diamonds and gold. The largest employer is the public sector. Its proximity to the lakes, including Waskesiu National Park, make it a tourist and recreational centre. Government services and a large corrections presence make Prince Albert a hub for a range of social services. The city houses a federal penitentiary, a men's correctional centre, the only female correctional centre in the province, and several youth centres as well as several healing lodges. It has a National Dental Therapy School, a branch of the First Nations University of Canada, and the Woodland Campus of the Saskatchewan Institute of Applied Arts and Technology, which offers a range of programs and includes off-campus branches of the University of Saskatchewan and the University of Regina.

The urban area has a population of 34,300 and immediate market area of just over 40,000; the health region, which encompasses the surrounding rural area, serves just under 80,000 people. Statistics Canada indicates the population is about 30% Aboriginal but urban school divisions indicated 54% of incoming kindergarten students in 2005 were Aboriginal. Its urban population is almost half Aboriginal. The surrounding area contains many First Nation and Métis communities as well as a French and Ukrainian cultural mix. Immigration is adding to a small but increasingly significant immigrant population. This diversity creates an opportunity for rich dialogue, and the capacity to build a powerful joint future that benefit from the strengths of Aboriginal and Caucasian cultures.

The population of Prince Albert is quite mobile and young. The under-35 population exceeds the over-35 population by 5,000. Compared with Saskatchewan's largest 8 cities, Prince Albert has the highest population of residents under 15 (using 2001 census data as reported by Elliott 2006). In 2005, the registered Indian population in the prime age work force (25-44 year of age) was 4.4 times greater than it was in 1971. The large youth population, as the demographics indicate, means that there is a concomitant increase in risky behaviours, which, in turn, has resulted in high juvenile crime rates. The mobility and low income levels of almost half the population has resulted in increased levels of violence, both domestic and family. However, if this young population is nurtured and supported, there is huge potential for the future.

Community schools have exerted a strong influence in the region for twenty-five years by reducing barriers to education and involving the community in the education of its children. There are strong arts, sports, and agricultural groups within the region that enrich its capacity to work together toward common goals. Prince Albert is known for its capacity to collaborate to meet the challenges it faces by utilizing its strong social capital. The Prince Albert region is vibrant, collaborative and committed to utilizing its many strengths and resources to build a positive future where all can realize their promise.

Introduction



Science is built up with facts, as a house is with stones. But a collection of facts is no more a science than a heap of stones is a house.

– Henri Poincaré, 1902

How do you learn to process information in an Information Age? Many have assumed the process is similar to that of an Industrial Age, except perhaps with more volume and more speed of processing required. We made a similar assumption and focused at first on the sheer amount of information that bombards students.

Initially we explored effective and efficient strategies for processing large amounts of information, understanding that there would be a developmental component to our exploration since we were working in a public school system with students from kindergarten through Grade 12. Although it seemed appropriate to begin the project by articulating strategies that could be taught to children in schools, it soon became evident that the strategies that students could use were like the stones in Poincaré's example; they were necessary but not sufficient. They did provide an excellent starting point because the search was not only concrete but fruitful, leading us to discover many useful strategies that were helpful to both students and teachers. At the same time, we discovered that the journey to understanding how people learn in an Information Age was neither simple nor linear.

This paper traces the stages of growth in the five-year journey that I and others took towards understanding how people learn in an Information Age; it takes us into schools and classrooms, a university, a community, and contexts of innovative interprofessional practice to discover the principles that shape and guide learning in an Information Age.

Information Processing Strategies



The way children process information as they explore the content areas was of particular interest to teacher librarians and one of my areas of responsibility as a school division consultant. Teacher librarians observed that students did not have strategies to facilitate access to, and use of, information, nor did teacher librarians have a consistent set of strategies that could be used across the school district that unfolded in depth and complexity as students progressed in school. We wondered how we could facilitate access to a range of information.

The first summer of the project was spent reviewing the literature and synthesizing information that could be shared with teacher librarians the following year to help us move toward our goal of a **consistent approach** across our schools that would encourage **collaboration with classroom teachers**. We realized that students needed to be able to process a broad range of material, including both print and non-print data, and with the advent of the worldwide web, develop capacity to search for, and use, information on the internet also entered the scene. A comprehensive powerpoint presentation was developed to share this information as well as a dozen or more binders of support articles that teachers could access if they wanted more in-depth information. Teacher librarians were most receptive to the strategies identified. They began to adopt some of them and also began to work more closely with classroom teachers since many of the new curricula demanded **resource-based learning**.

Although there were many exciting new strategies and approaches that we began to use, two, in particular, stood out:

- **Stripling and Pitts (1988)** identified two complementary processes that need to be developed for students to be critical and creative information processors. Furthermore, they noted that these two processes should work together and be somewhat balanced.
 1. They suggested that students need to develop **blueprints**, which are logical processes and specific strategies that are transportable across content domains. Although they can be both linear and non-linear in nature, they usually require left brain operations.
 2. They also indicated that children need to be encouraged to engage in **brainstorms**, that is, right brain, holistic, non-linear, creative thinking processes that involve a variety of forms of representation. They posited that strategies in this area unleash the creative processes.

Quickly we realized that our curricular approach had been biased toward establishing blueprints and, therefore, we began to find ways to nurture creative processes as well. Thinking about our strategies using this framework enabled us to organize our strategies and examine the kind of balance we had between the two processes. In addition, it caused us to examine students' performance using these two processes as **windows of observation**. We noted that some children were better at one and some were better at the other, but the most effective students were able to use one process to stimulate growth and development in the other. We came to understand that these two processes were **symbiotic**, that is, they were mutually supportive and necessary for the continued growth of each

other. Our former linear thinking had led us to believe that the blueprints should be developed first and then the brainstorming would naturally emerge. Working with these strategies enabled us to understand that we could help students to develop strategies in each area. A **structured environment** that enabled students to predict the flow of events actually provided students with the freedom to explore creative ideas as well as accomplish the more linear blueprint tasks.

- **Wray & Lewis (1995)** from Australia developed a **research process** that was comprehensive and included some of the latest research in cognitive development. They called their research process EXIT (Extending Interactions with Text). It established a ten-step process:
 1. **Prior Knowledge**
 - What do I already know about this?
 2. **Establishing Purpose**
 - What do I need to find out?
 - What will I do with it?
 3. **Locating Information**
 - Where will I get the information?
 - How will I get the information?
 4. **Adopting Appropriate Strategies**
 - How will I use this information to get what I need?
 5. **Interacting with Text**
 - What can I do to help me understand better?
 6. **Monitoring Understanding**
 - What can I do if there are parts I don't understand?
 7. **Making a Record**
 - What should I make a note of?
 8. **Evaluating Information**
 - What information should I believe?
 - What information should I keep an open mind about?
 9. **Assisting Memory**
 - How can I help myself remember important points?
 10. **Communicating Information**
 - How should I let others know about this?

The process was systematic; it certainly provided students with a blueprint for research; and, it was far more comprehensive than many of the approaches that we had used previously. Sharing this research process in the teacher librarian meetings led us to compare and contrast our previous approaches. Work that I'd done with teacher librarians on cognitive processes indicated that this research process also integrated some of the latest research and thinking in ways that enabled students to unleash their capacities. For example, it caused the students to acknowledge and use their background knowledge, identify strategies for interacting with text, and create memory aides, as well as contemplate their end product and audience before they began their work. This kind of planning and forward thinking saved many hours of time and effort and made students more productive and more efficient. Once this strategy was integrated as a **platform for research**, students began to explore other ways to be more effective; in other words, it unleashed their creativity. The way the research process unfolded led students to synthesize information rather than just regurgitate it. As well, it caused them to become very discerning in what they accepted as evidence. These **critical evaluation skills** are essential skills in an Information Age.

One of our senior English teachers noted that searching for accurate, reliable and important information on the internet was like panning for gold, or looking for a needle in a haystack. You had to sort through lots of information before the nugget that you needed was discovered. As Naisbitt (1984) noted, "The emphasis of the whole information society shifts, then from supply to **selection**" (p. 17). This observation highlighted the need for students to develop critical screening skills.

We appeared to be making progress; both students and teachers were learning new things about information processing. Furthermore, we were developing a sense of **community**, a powerful **cohesiveness**, and joint **purpose** in our teacher librarian group. We discovered that our conversations and inservices were causing us to be more **consistent** across our division. Moreover, there was much greater **continuity** from grade to grade and across schools. We were beginning to envision a multi-grade plan that used what was taught at one grade as a base on which new skills and strategies could be built in subsequent grades. In addition, we were beginning to talk with classroom teachers about the skills students required in various curricular areas and how librarians and teachers could work together to enable students to function more effectively. We also began sharing the templates that were developed, and some teacher librarians began to develop large wall charts as an aide for group instruction.

Teacher librarians shared these templates with classroom teachers and used them in resource-based learning units of study. This practice caused classroom teachers to see teacher librarians as valuable teaching partners. Teachers were starting to see that student evaluation could be a joint process; they valued the notion that **co-teaching** in this way could afford one teacher the opportunity to focus on content mastery and another teacher the opportunity to focus on the strategy or process of mastering the material. In effect, each teacher could become a **coach** in one area and play a supporting role in the other area. Students loved having this differential feedback because it helped them to separate thinking about process and content mastery. It helped them develop a vocabulary for talking about content and process and gave them some skills for monitoring their growth in each. For students there was a way to think about the whole and the parts in both the process and the mastery of the content. In effect, it enhanced their capacity to think about their own cognitive functions, something the literature calls **metacognition**. Teachers found they could evaluate learning objectives more effectively and that students were now their **partners** in this evaluation. The students had the benefit of two teachers and, the teachers found they had a partner who could observe and evaluate student learning from a different vantage point.

Strategy Learning Is Developmental



Some wonderful templates for students were being designed and both student and teacher awareness was growing. However, we soon realized that the learning of a strategy was itself developmental. Until students mastered the strategy, they couldn't really use it to engage in complex tasks of information processing. Of course, this reminded us that human beings have limited processing capabilities, which was something we'd already discussed. The intricate nature of some of these strategies meant that control of the process itself was demanding all the students' available attention. Undoubtedly, we now had to face the fact that learning to process information in this new age involved more than just teaching students new strategies! Students had to balance the learning of content with the mastery of strategies to facilitate this learning.

With that in mind, I began working with teachers and students more closely at a time when I was also beginning to teach at the graduate level in the Department of Educational Psychology and Special Education at the University of Saskatchewan. I developed a model of strategy learning (see Table 1), based on a Vygotskian approach, that suggests more experienced learners (we sometimes call them teachers) have a vital role to play in the education of less experienced (we usually call them students). Vygotsky described this process of mentoring and called it the zone of proximal development, something we came to call **the learning zone**. In this zone, as students gain more control, teachers gradually diminish their support, thereby facilitating not only mastery of the strategy but also a concomitant move to independent functioning. This process has been referred to as the **continuum of independence** in the literature. Articulating the development of strategies in this manner helped teachers to understand that just because they 'taught' a strategy didn't mean that students were able to use it unconsciously and focus their complete attention on content learning. The teachers realized that instruction is primarily a relationship in which the teacher supports the students to expand the cutting edge of their competence in a manner that is both supportive and challenging. The teacher lends his or her knowledge and manner of functioning until the students can take strategies under their control. This is a dynamic relationship that shifts and moves as the students' competence emerges. As soon as students gain mastery in one area, their learning zone shifts to another area where they require teacher support and guidance before they can gain independent control. In this way, students learn in the shelter of their teachers. However, for this learning zone to function optimally and effectively, teachers need to understand when and how to remove their support so that their assistance does not become a crutch but rather, mobilizes mastery.

The process, however, is much more easily explained than practiced because although it appears linear, the process is actually **recursive** in nature. Moreover, as the complexity of the content increases, new demands are placed on the strategy. Thus, there is a need to continually develop the breadth and depth of the strategy itself so that it can support the increased demands that more complex and abstract content place upon it.

Our initial idea had been to develop a core group of strategies at each level, but this discovery showed us that we would need to revisit and further develop strategies already learned so that the strategies could support the new information

TABLE 1: DEVELOPMENTAL STAGES OF STRATEGY LEARNING

1. **Awareness**
 - (S) I can recognize it when someone else uses it
 - (T) Demonstration and Modelling
2. **Accurate Use**
 - (S) I can use the strategy but I need someone to, or I need to, talk through it as I use it
 - (T) Guided and coached practice
3. **Automatic Use**
 - (S) I can use the strategy without thinking about each step
 - (T) Opportunities for self-directed practice
4. **Unconscious Use**
 - (S) Natural, unconscious application in situations like the ones in which I learned the strategy
 - (T) Guided reflection and teaching for transfer
5. **Transferred Use**
 - (S) I can naturally apply this strategy to new diverse situations
 - (T) Encouragement to apply this strategy widely

Key: (S) What the student is able to do
(T) What the teacher needs to provide

* Reproduced from Developmental Stages of Strategy Learning. Nosbush, L. 2000. Facilitating Strategy Development in Our Schools. *Query*.

processing demands at each subsequent level. We were shocked at how natural and unconscious our linear assumption had been and, how little it matched the reality of student experience in libraries and classrooms!

As we developed and examined this process for supporting strategy learning with a range of learners, including students with special needs, **our observation skills were honed** and we began to 'see' student responses with new eyes. **Instruction became more responsive to student need** and teachers began to see the **sympiotic relationship between teaching and learning**. They noted that as students demonstrated their control of a strategy, they would respond in increasingly more rapid and complex ways. We began to use a baseball metaphor that depicted the teacher as a pitcher and student as a batter. Unlike baseball, the goal in the instructional game is to **'pitch the instruction'** in such a way that the **students can hit, or engage with, the ball of learning** and, demonstrate of mastery of learning objectives. We had to humbly acknowledge that with the best of intentions, we had been pitching our instruction in ways that caused many students to 'strike out.'

In many ways, this was a reversal of our previous notions of teaching. Usually, when we were focused on teaching a new strategy, we would prepare lessons to carefully introduce the strategy. Then we often acted as if once we had taught the strategy students should just be able to use the strategy effectively and efficiently. However, when I asked my graduate students if that was the way they learned something new, they noted that it often wasn't. When graduate students were learning something new in the classes I taught, they would describe **personal journeys of learning**. Although this self-reflection helped to hone their observation

skills, I realized that I needed to help them **process the things they were learning in more depth**. It was not sufficient for them to know 'that' or even to know 'how.' I certainly wanted them to learn these things, but what I really wanted was for them to ask more questions, such as 'why' and 'where' and 'when' and 'under what conditions are strategies optimally learned?' Above all, I wanted them to become aware of how much previous learning and experience could affect how they learned and how they processed information. Furthermore, there was a need to collectively explore just how to be **responsive to students' needs**. We knew that this was our goal, but how could we develop the instructional and evaluative tools needed to be truly responsive?

Although we had made great progress by becoming aware of the stages of strategy learning and just how nuanced the responses between student and teacher needed to be in the learning of a strategy, we knew that our next step must enable us to **engage the mind as well as the heart**. In addition, we had to find a way for both teachers and students to further **direct their focus** because this had been so productive for us to date. An appropriate place to begin was in the teaching of thinking - the ultimate human resource (de Bono, 1999, p. xi). Much of the eighties were spent exploring cognition but toward the end of that decade **metacognition**, i.e., thinking about thinking, began to emerge as a critical attribute of those who wanted to be strategic about their actions. We reasoned that we not only needed to change, evolve and systematize some of the strategies we were helping students to develop; we also needed to find a way for both students and teachers to think about their thinking and their ways of operating in learning situations.

Exploring Cognition Using Six Thinking Hats



We would all agree that thinking is complex, often unconscious, and usually multi-faceted and rapid. Edward de Bono (1999) notes that the ‘gang of three’ (Socrates, Plato and Aristotle) influenced Western thinking in the direction of argument (p. 1) and, as a result, they shaped our preoccupation with ‘what is’ which is determined by analysis, judgement and argument (p. 2). de Bono suggests that there is another whole way of thinking that is concerned with ‘what can be.’ It involves “**constructive thinking, creative thinking and ‘designing a way forward’**,” and de Bono proposes the six hats method of parallel thinking as a simple model for these types of thinking.

The essence of parallel thinking is that “at any moment everyone is looking in the same direction” (p.5), notwithstanding that the direction can change. The value of either the physical or metaphorical hat is that it **signals a role** or a type of thinking that the whole group will utilize (p. 5), **fully using the intelligence, experience and knowledge of all the members of the group** (p. 9) in an attempt to explore subjects honestly. The six hats method enables the group to focus on one type of thinking at a time, rather than trying to juggle multiple types of thinking. It also saves a great deal of time and provides a neutral, more objective exploration of a subject, reducing confrontational and adversarial approaches that “exacerbate the ego problem” (p. 9-11). The six hats each have a distinctive **colour that indicates the type of thinking** being utilized:

- The **White Hat** is neutral and objective, and concerned with facts and figures.
- The **Red Hat** is concerned with emotions, intuitions and hunches. People are not asked to justify their feelings.
- The **Black Hat** seeks to avoid dangers and difficulties by pointing out weaknesses, potential dangers, or drawbacks.
- The **Yellow Hat** is optimistic and deals with hope and positive thinking.
- The **Green Hat** indicates creativity and new ideas and is frequently characterized by ‘outside the box’ thinking.
- The **Blue Hat** is concerned with control, synthesis, and orchestration of the other thinking processes.

These hats can also be viewed in three pairs which have complementary functions: White and Red – reason and emotion; Black and Yellow – challenge and strengths; and Green and Blue – brainstorming and blueprints.

de Bono suggests that the hats can be used in two basic ways:

- Singly to request a specific type of thinking, or
- In sequence to explore a subject or solve a problem (p. 16).

We used the method in yet a third way. Once students were somewhat familiar with the types of thinking involved, we had students practice and develop one of the types of hat thinking in colour-alike groups in order to explore the depth of a particular stance or type of thinking. Then, we had students jigsaw to examine what happened when all the colours were combined. Although this process seemed to be what de Bono suggested, we found that it was the ability **to move back and forth between the colour-alike and the mixed-colour dialogue** that really stimulated students’ thinking and research. Much like an orchestra requires sectional practice, it also requires the whole orchestra for the full

symphonic sound to emerge. Our students realized that the ability to move back and forth between these processes helped them appreciate the particular types of thinking; it also enabled them to see the contribution each type of thinking could bring to the overall dialogue. Furthermore, it helped them to understand how each type of thinking could shift and change the meaning the whole group was making. They also developed an understanding of the creative tension that should exist between parts and wholes.

Initially, the thinking hats method was used as a strategy in a graduate course on cognitive skills in special populations. The students found the description of the strategy interesting, but when they were engaged in using it, they began to **reflect on their own thinking** styles and examine the types of thinking nurtured in different areas of the curriculum. Because the metaphorical hat can be used to shift thinking within the group, they found that these shifts could cause them to explore a topic in an entirely different way. Furthermore, it could help students to **hone skills within a domain**. For example, initially, most thought that **White Hat Thinking** would be the simplest until they confronted the two-tier system of information:

- Tier 1 consists of checked and proven facts, the first-class facts.
- Tier 2 contains facts that are believed to be true but have not been fully checked, second-class facts.

Of course there is a continuum from always true to never true but the white hat is characterized by objective presentation and testing of the quality of information and assists students immensely in their research and use of data.

We began to see a connection to some of the other work we were doing. In the literacy area, we had introduced Russell Stauffer's **Directed Reading Thinking Activity** (DRTA) in both reading and listening contexts as a way for students to process information with an **anticipatory set** as well as discover the cohesion and structure in texts. This strategy required students to read a section of text, anticipate or predict what would come next, record the predictions, read the text to verify the quality of their predictions, and finally, articulate what they'd learned about what makes a good prediction. Because we were using the strategy in an era long after the one in which it was developed (Stauffer proposed this strategy almost forty years ago), we encouraged metacognitive reflection by using a simple question to ask students to support their predictions: "What makes you think so?" This use of Stauffer's strategy helped students to **draw links** between the use of the scientific method in various natural sciences as well as develop a basic understanding of evidence-based decision-making. The students were also able to attend to the structural organization of passages and use it as a further aid to prediction.

When **White Hat Thinking** was introduced, we used a game-like activity called "Truth or Baloney" to make the checking of facts and 'common knowledge' thought-provoking rather than just hard work.

Students began to get a glimpse of how the parts of a body of knowledge in a content area work together and why research is needed. They no longer viewed research as something university professors did; they saw it as a process they themselves used all the time. In fact, these special educators saw that these processes could be used with very young children and across the spectrum of ability. Not only would the thinking in each domain mature but the content with which it was used would become increasingly more complex and more abstract.

The **Red Hat Thinking** provided a license for people to talk about their feelings in a legitimate way. This type of response was usually evoked with a global question, such as “How do you feel about?” There were huge gender stereotypes around the discussion of feelings.

Where once we tried to separate the emotional and cognitive needs of children, trying to keep ‘all that emotion’ out of the learning area, now we know that each stage of emotional and intellectual growth involves “the simultaneous mastery of what are ordinarily thought of as emotional and cognitive (or intellectual) abilities” (Greenspan & Shanker, 2004, p. 51). Cognitive development and emotional development are intimately bound together from the beginning. Greenspan and Shanker have articulated and carefully described the staged progression that people experience during their lifespans as “the mysterious and revealing journey from an infant’s earliest emotional interest, insight and sounds to an adult’s reflective wisdom” (p. 51). **Dual coding** is present from the earliest stages of development. Each sensory perception forms part of a dual code that “has physical properties (bright, big, loud, smooth, and the like) and emotional qualities (soothing, jarring, happy, tense).” This system allows a child not only “to ‘cross-reference’ each experience and subsequent memory in mental ‘catalogues’ of phenomena and feelings but also to reconstruct them when needed” (p. 57). Each stage of emotional and intellectual growth involves “the simultaneous mastery of what are ordinarily thought of as emotional and cognitive (or intellectual) abilities” (p. 51). In reality, emotional and cognitive growth is continuous (Greenspan & Shanker, p. 54) and grows out of the earliest relationship with the primary caregiver.

Research is now demonstrating that our desire to keep emotion out of thinking is, in fact, not the way human information processing works. Whether we acknowledge it or not, emotion pervades our thinking. de Bono’s Red Hat gives permission to explore this arena of experience and acknowledge individuals’ emotional reactions, which otherwise simmer beneath the surface.

To illustrate these points in a graduate class, we did a role drama of a difficult parent-teacher-administrator-legal counsel interview involving a special needs child. At several intervals we moved out of role to put on our red thinking hats and explore emotional reactions. Overwhelmingly, each individual was ‘feeling’ threatened, blamed, inadequate – all complex emotions as described by de Bono. What ‘surfaced’ through the role drama were often simple emotions, most typically anger and sadness. One was not a mirror of the other, and if we merely processed what was observed and had no way of moving beneath the surface to acknowledge the complex emotions present within the group, we realized that our assumptions could be seriously inappropriate. We switched roles frequently enough in these various role dramas that teachers were able to experience ‘from the inside’ what other members of this interview group might be feeling and could only heretofore be observed from the outside. Profound insight came when graduate students were able to identify with the feeling from their typical role and relate personal experiences and then differentiate between the **external observation** and the **internal experience** of emotion. Students were able to discern that what was observed had been labeled and assumed to represent what was happening inside the person and that these assumptions were frequently inaccurate.

A poignant classroom example will further illustrate the point. For a term during this project I filled in for one of our teacher librarians a half-day a week from January to June to implement some of the strategies and approaches we were discussing. This afternoon was spent with K – 3 classrooms in an urban

community school. One particular afternoon, we were sharing a short picture novel by Jane Resh Thomas, *The Comeback Dog*, in a Grade 3 class. The story chronicles how a badly beaten dog, who was abandoned in a culvert, was found and nursed back to health by a young farm boy. It describes their subsequent adventures and the wonderfully close bond that developed between the two. One of the beginning chapters in the book had been shared that day, depicting the discovery of the dog in the culvert. A large portion of this chapter had contained first person reflections of the young boy because the dog was unconscious when he was discovered in the culvert. We were using de Bono's thinking hats to explore our interpretation of the book. In advance, I'd reviewed the Red Hat and given each student a tiny red hat on a necklace to help the students process the chapter as they heard it using red hat thinking. As was our practice, we provided a brief period of silence after the chapter was read for students to sit and think about it. We talked a bit as a whole class and then moved into small groups of three to continue the discussion.

After the short time for quiet reflection, I asked, "Who would like to share their reactions?" A young girl who did not usually share in large group discussions responded quietly, "I know just how the dog feels. He feels all broken and hurt inside." She proceeded to describe how much it hurts when you're hit, and how it hurts you physically but also 'way deep inside' – her way of describing the psychological scars that can last a lifetime. This was the first time she revealed her physical abuse and the class's response was powerful. They listened intently, many nodding to acknowledge that they too knew what it was like. They moved in even closer to her, some patting her shoulder. Some acknowledged the bravery and courage required to share something so difficult. Her trust and sharing created a bond among us that you could feel. That day we became one and operated in a totally different fashion thereafter. Other teachers also noted the transformation in the demeanor of this class.

After a time of silence, I posed the questions, "What will the dog need to get better?" and "Can the dog really get better?", and followed them with "Who will help the dog to get better?" Finally, I asked, "Will what has happened to the dog always be part of who the dog is?" All the while, we knew that we were only peripherally talking about the dog. Later, we dealt with the moral and legal issues of child abuse with that family and with the class in more general terms.

This experience taught all of us the value of red hat thinking and disabused us of the notion that very young children cannot share at a deeply emotional level and express the empathy necessary when such sharing occurs. The students continued to care specially for their peer who had suffered and taught us most assuredly that we live, love, learn and discover our human being in the shelter of each other.

The types of thinking with other hats taught us valuable lessons as well:

- The **yellow and the black hats** taught us that our emotional space was very different when we were doing yellow (focus on strengths) and black (focus on challenges) types of thinking. We learned how contagious these types of thinking were in groups. These reactions showed us that both yellow and black hat thinking were necessary and that black hat thinking could make projects/activities that utilized only yellow hat thinking even more effective. Neuroscience confirms what we experienced; functional imaging of the brain shows different emotions and ways of thinking increase activity in different parts of the brain.

- The **green and blue hats** also held valuable lessons. Exploring the green hat (creativity) taught us that we frequently constrained 'outside the box' thinking by using too many blueprints or linear models. If we wanted creative thinking, the environment had to encourage it and nurture it. We realized that brainstorming may not occur on a timeline or in a sequence, but they do require time, space, energy, and encouragement to emerge. Our reactions could facilitate or extinguish these endeavors. Although some teachers are better at green hat thinking than others, we can improve by working at it. These blue and green hats of thinking, in particular, taught us that the skills for each thinking hat are different and that we do a disservice to our cognitive abilities when we use the criteria in one area to organize and evaluate thinking in another area.
- The **blue hat** taught us the value of organization, or 'orchestration' as we grew to call it. We grew to value the need to synthesize, realizing that synthesis required great skill and was something all of us needed to practice. We also came to understand that dealing with massive amounts of information required an organized way of storing the summary statements, both visually and practically. As we worked in this way, we could see the continuum of independence and could observe students gradually gaining mastery and control. We saw teachers supporting teachers, teachers supporting students in large and small groups, and students supporting students, all in ways that mobilized their mastery.

de Bono's strategy for focusing awareness and developing different types of thinking enabled us to move our 'thinking about thinking' (metacognition) to a space where both students and teachers could dialogue about it.

Our work with the six thinking hats demonstrated that we needed to move beyond strategies, into an area where we could facilitate learning from one another and support one another as we pursued individual and collective goals. Although the strategies we worked with and further developed are not all discussed here, they did show us that it was important to give students **tools for processing information**. However, we now realized that the students also needed **tools for working together** in order to process that information. We had clearly moved from consideration of an organized and integrated collection of critical strategies to consideration of the **social nature of learning**. The underlying question now became, "How can we help students and teachers function in a learning community?" Our master teachers already provided some shining examples of how to do this, but we wondered how to encourage and nurture this behaviour so that all students could experience it.

The often-cited Gabelnick, MacGregor, Matthews & Smith monograph (1990) has been the common reference for understanding **learning communities**. It defines learning communities as:

Any one of a variety of curricular structures that link together several existing courses – or actually restructure the material entirely – so that students have opportunities for deeper understanding and integration of the material they are learning, and more interaction with one another and their teachers as fellow participants in the learning enterprise (p. 19).

This definition certainly helped us to understand the social nature of the learning endeavour. The American Library Association's *Information Power: Building Partnerships for Learning* gave us some additional ideas about how what

participants in learning communities would be like: “Independent, ethical, lifelong learners who achieve personal satisfaction and who contribute responsibly and productively to the learning community and to society as a whole.” However, while the definitions spoke about outcomes that most would agree are needed, we began to ask, “How do we achieve that?” We began to explore how we could facilitate **coming together to learn in ways that would benefit the group and individual learners**.

The Caledon Institute, after a major review of the literature that included both theoretical and practice-based sources, discussed **how communities learn**. Its findings are articulated in terms of three major themes:

1. There is significant **difference between knowledge and information**; they are not interchangeable terms. Information doesn't become knowledge until someone uses it.
2. The learning process must take into account “the **needs, concerns and interests of the learners**, or potential users of the information” (p. 1); and
3. While the conversion of information into knowledge was once thought to be a linear, unidirectional process, often stimulated by a one-way transfer of information from teacher or expert to a learner or layperson, which has come to be labeled ‘transmission,’ now we understand that learning is “best undertaken in an atmosphere of **direct collaboration between apprentice and master**” (p. 12). This relationship should be collaborative, enable two-way communication and be based on mutual trust and shared norms. Not surprisingly the work on adult education differentiated between the kinds of relevant activities and their outcomes:
 - Those learned “through observing, reading and listening are observational and passive”; and, on the other hand,
 - Those learned “through experimenting, experiencing, writing and talking are discovery and active” (Brundage & MacKeracher, 1980, p. 2 as cited by Torjman, Leviten-Reid, Camp & Makhoul , 2001, p. 12).

In the abstract for this paper, the authors note that “learning takes place most effectively through an interactive process in which potential users of information are involved in exploring a given challenge” (www.caledoninst.org). The given challenge for my university students was to figure out how best to assist special needs learners, and for classroom teachers and librarians the challenge was how best to engage and assist all learners on their journey to becoming lifelong learners by mastering the curricular objectives in various content areas.

The journey to understanding how learning communities function involved many steps. With each one, our appreciation of what transpired in these communities grew. As we observed, participated and learned, we reflected on the experience in an effort to understand the principles that guided such interaction.

The Method of Focused Conversation



The words of John Dewey led me to search for a way to help teachers work together as a community of adult learners, both in university classes and in schools, and increase their capacity to be reflective.

Intellectual learning includes the amassing and retention of information. But information is an undigested burden unless it is understood.... And understanding, comprehension, means that the various parts of the information acquired are grasped; in their relations to one another, - a result that is attained only when acquisition is accompanied by constant reflection upon the meaning of what is studied.

– John Dewey

At this same time Saskatchewan Learning's Community Education Branch was developing an introduction to community education to support the large expansion of community schools in the province. As we were working out how to create a framework and a metaphor for community education, our group was introduced to the **Method of Focused Conversation** developed by the Canadian Institute of Cultural Affairs. Initially, this method was devised to help people from different cultural backgrounds communicate more effectively; however, after experiencing it in an oral setting, I surmised that it could become **a powerful learning tool for my graduate students**. I had used **learning logs** in my university classes for years, but this method seemed to **link thinking and action in a more powerful way**, creating a natural context for both individual and group reflection. Aware that students at all levels want something that is both practical and theoretical, I found that this method opened up a **whole new world of possibilities**.

The method (ORID) uses questions at four levels:

O – The Objective Level

Questions about facts and external reality, or impressions are focused on common experiences in the external world.

R – The Reflective Level

Questions call forth immediate personal reaction to the data. Emotions or feelings, hidden images and associations with the facts are focused on personal experience and reactions. This level acknowledges that whenever we encounter an external reality (the data at the objective level), we experience an internal response. Although the objective reality may be similar, the internal response is unique and dependent on our personal wisdom and lived experience.

I – The Interpretive Level

This level poses questions to draw out meaning, values, significance, and implications. In other words, it causes people to integrate the objective reality and the individual response in order to make meaning.

D – The Decisional Level

This level casts questions so as to elicit resolution and bring the conversation to a close. It enables individuals or the group to make a decision about the future. In effect, it causes individuals to see how their behaviour will change now that they have made new meaning (Nelson, 2001, pp. 11 – 13).

The processes outlined above are called ORID or the Method of Focused Conversation. The method is a bundle of relationships in which the process at each level builds on the data from the levels before it.

The Method of Focused Conversation had the naturally recursive nature that we realized was needed, but it also had a momentum directed towards thoughtful action. It included something the literature has begun to call **evidence-based decision-making**. A detailed description of the four types of processes involved is given below in Table 2.

TABLE 2: THE METHOD OF FOCUSED CONVERSATION

	Objective Level	Reflective Level	Interpretive Level	Decisional Level
Focus of the questions	Data, the 'facts' about the topic, external reality	Internal relationship to the data	The life meaning of the topic	Resolution, implications, application, new directions
What it does for the group	Ensures that everyone deals with the same body of data and all the aspects	Reveals individuals' initial responses and validates their experience	Draws out the significance from the data for the group; focuses on learnings	Makes the conversation relevant for the future
Questions are in relation to	The senses: what is seen and heard and touched, etc.	Associations, memories, feelings, moods, or emotional tones	Layers of meaning, purpose, significance, implications, 'story', values, patterns. Considering alternatives, options. Comprehension	Consensus, implementation, action, summarizing, application of knowledge, future directions
Key questions	What objects do you see? What words or phrases stand out? What happened?	What does it remind you of? Which part surprised you? What delighted you? Where did you struggle?	Why is this happening? What is this all about? How does this compare? What does all this mean for us? How will this affect our work? What are we learning from this? What is the larger pattern emerging? What is the insight?	How might you use this? How would you summarize your learning? What decision is called for? What are your next steps?
Traps and pitfalls	Asking closed questions, or questions not specific enough; no clear focus; Ignoring objective questions because 'they are too trivial'	Limiting the discussion to an either/or survey of likes and dislikes; Asking vague or broad questions that don't evoke relevant personal associations; Asking questions that demand embarrassingly personal answers	Inserting precooked meaning that prevents real insight; over-intellectualizing or over-abstracting; judging responses as right or wrong	Forcing a decision when group is not ready, or avoiding pushing group for decision
If the level is omitted	There will be no shared observation of what the group is discussing; the various comments may seem unrelated.	The world of intuition, memory, emotional, and imagination is ignored, and no shared personal experience is articulated on which to build meaning.	Group gets no chance to make sense out of the first two levels. No higher-order thinking goes into decision-making.	Learning is not consolidated, and the responses from the first three levels are not applied or tested in real life.

Based on information provided in The Method of Focused Conversation Description. In Nelson, J. 2001. The Art of Focused Conversation for Schools. Toronto, ON: New Society Publishers, pp. 14 – 17. Used with permission.

As we began to explore this method in a number of different contexts, we became increasingly aware of how many judgments are made before examining the objective information. In fact, we noticed just how often we skipped to the interpretive level before we even examined the objective data. This method enabled us to examine critically our unconscious thinking processes, demonstrating how often we suppressed the reflective level and didn't consider its use (sometimes helpful and sometimes not) as a type of advance organizer for the incoming data. As a result, we came to understand why the same objective data could result in very different interpretations and actions and could even create a base for misunderstanding if we failed to acknowledge and reflect on the data. We had to acknowledge that sharing at this level was difficult but necessary, often leading to individual and collective growth.

A shared or common experience could evoke very different reactions and lead to very diverse interpretations. To make this conclusion even more apparent, we used role drama in some of the graduate classes and debriefed along the way. The Method of Focused Conversation became a **group inquiry process**. It also led to a **new type of reflective journal for students**, one that caused them to examine their teaching experiences more deeply and thoughtfully.

One of the students' core assignments became a written form of this method. Students were asked to pick three or four ideas that were discussed in the readings or the lectures, describe them for the Objective Level, and then select one, or at most two, to work through the other three levels. Over time students tried to link information from both the lectures and the readings. Choice was given so the students could pick something that was of interest to them, recognizing that in these graduate classes in Special Education, students typically ranged from those who worked with preschoolers to those who worked with students almost ready to leave the school system, to those who worked with adults. Students were asked to submit learning logs no longer than five pages with a maximum of a half-page devoted to the objective level. I responded to their logs each evening and, with the students' permission prior to the beginning of class, I would ask them to share some segments from their logs. In this way, we were able to learn from one another and explore some of the topics in even greater depth. Later in this paper, one class's responses will be explored in more detail.

Students felt quite comfortable at the Objective Level, although they were at times inaccurate about the facts because the information presented was complex. These inaccuracies were easily corrected through feedback from the professor. Many students noted that this type of feedback was very useful for their emerging understanding, and they used this section to study for their examination. This level needed to be carefully clarified by suggesting that eight people in a room would observe the same thing or read the same content, and that the facts were what we were trying to capture. Summaries could be made but large amounts of inferential thinking should be saved for the Interpretive Level discussion.

The **Objective Level** was considerably more demanding when the students were discussing student behaviour. They realized that they frequently did not describe behaviour; rather, they interpreted it before they took the time to accurately describe it. As we practiced this level, they developed new skills for description and grew to appreciate how difficult it is to describe accurately what is seen and heard. They began to understand **the cornerstone of evidence-based decision-making is solid baseline data**. They discovered that data-gathering was like White Hat Thinking and began to see their capacity to collect good data and verify it as a starting point. In fact, they discovered that many should participate in this

process: students, parents, classroom teachers, other teachers, and other professionals. It was the ability to put the objective data in the centre of the dialogue that most effectively enabled a focused conversation with a range of participants.

The **Reflective Level** posed some challenges because the students had become accustomed to suppressing their emotions. Once they developed skill in expressing what they were feeling, and a sense of trust and safety within the group, they were able to share their personal connections and, their appreciation for one another grew. They began to see why people felt so differently about the same objective information. They saw the link between the reflective level and de Bono's Red Hat Thinking, realizing that they were there to receive others' feelings and personal connections, not to judge or challenge them. Although they were surprised that the same objective information could evoke such diverse emotional responses, they came to understand why, when the personal connections were articulated. They gained an appreciation for the richness of experience possessed by the group, and they grew to understand that they were powerful in this collective meaning-making process.

Students **acknowledged the richness of their diverse experience**. They discovered how difficult it was to accurately describe objective data, how challenging it was to make sense of the process at the Interpretive Level and just how easy it was to resort to global action recommendations that were so broad that they need not be implemented. As the process unfolded, through feedback in the form of dialogue between the professor and students and among the students in class discussions, students honed their skills and their capacity for critical reflection. As the relationships deepened, the **trust and sense of safety** grew and the class began to function as a **learning community**. Instead of the typical unidirectional flow of information and expertise, a true **dialogue** emerged.

The **Interpretive Level**, contrary to popular expectation, was not easy, especially when it was not the starting point, but the outcome of the Objective and Reflective Levels. On an individual level, it required synthesizing one's own journey; on a collective level, it required negotiating meaning in the group. This negotiation required open communication and willingness to be changed by the group process rather than just desiring to influence the group. This level involved **mining the rich wisdom and lived experience of the individuals within the group and then negotiating a shared meaning**. Students were active participants in this recursive process. They listened, thought, clarified, and suggested possibilities and, in the process, they became a team that trusted and respected one another's thinking, experience and, professional and personal competencies.

David Bohm (1996) has examined the nature of dialogue and suggested the image of "**a stream of meaning flowing among and through us and between us**" (p.6). In the foreword to his book Nichol synthesized his conception of dialogue:

A multi-faceted process, looking well beyond typical notions of conversational parlance and exchange. It is a process which explores an unusually wide range of human experience: our closely-held values; the nature and intensity of emotions; the patterns of our thought processes; the function of memory; the import of inherited cultural myths; and the manner in which our neurophysiology structures moment-to-moment experience (p. vii).

The nature of true dialogue, as described by Bohm, takes you to a space where you are as likely to be changed as to change others. In many respects, it is a powerful learning zone. The impact of this type of dialogue is “the possibility of...transformation of consciousness, both individually and collectively (p. 95). Because this space is respectful but open to possibility, and because both individual and collective meanings are constructed, it is **at the same time, deeply satisfying and challenging. There is a synergy created that literally crackles with possibility.**

Yankelovich (1999), in discussing dialogue, suggests that **conflict can be transformed into cooperation:**

When dialogue is done skillfully, the results can be extraordinary: long-standing stereotypes dissolved, mistrust overcome, mutual understanding achieved, visions shaped and grounded in shared purpose, people previously at odds with one another aligned on objectives and strategies, new common ground discovered, new perspectives and insights gained, new levels of creativity stimulated and bonds of community strengthened (p. 16).

This was the kind of cooperation that we needed to plan and implement programs for special needs youngsters. Planning for a special needs child/youth is comprehensive; it requires thinking about the student's in- and out-of-school experiences and how the stakeholders should work together to help the student realize his or her potential. It means focusing on the short term in light of the long term and never losing sight of the connection between life and school. Parents, teachers, administrators, students and other professionals, as well as potential employers and community members who provide support, must work **as a cohesive team to orchestrate the range of experiences and the contexts that will nurture student development** in cognitive, social, emotional, physical and spiritual domains, as Saskatchewan Learning's goals of education suggest. The task is no less 'special' when the students fall within the average range. Children have all kinds of minds and they are constantly sending signals about how their minds work, but are we listening and able to interpret those signals (Levine, 2002)? Some of our response has to do with understanding how the mind works and some has to do with what Levine calls **output failure:**

Most of our own success and that of our children is experienced and demonstrated through accomplishment, the attainments of our heads, and our hands, the sum total of our school, family, and career contributions....The power and the vulnerability of the drive to be productive are frequently neglected...Casualties result when individuals have output failure and come to believe that their work is worthless and perhaps never will be worthy. Our society pays an exorbitant price to restore their mental health, to punish them within our justice system, to deal with their underemployment, and to cope with the many other negative effects of their thwarted drives toward success (Levine, 2003, pp. 1-2).

Our goal was to understand children's learning in special and regular populations in order to be more responsive to their learning needs and the Interpretive Level of this process. Furthermore, we would need to explore and understand their output failure in order to be truly responsive to their needs.

Discussion and planning at the **Decisional Level** was challenging. It was natural to make grandiose recommendations; however, the broad and far-reaching nature of such recommendations meant there was no real responsibility to

implement them. When it was clarified that the recommendations should be specific and something the individual would, and could actually do, students started to see the point of the whole focused conversation. They also acknowledged that any large change starts with a single step. As discussed earlier, this process is recursive; often, students would find themselves returning to the data and their personal connections and emotions only to nuance the meaning they had initially created and ultimately change the recommendations for action. It was at this point that they saw the power of a learning community – a group of people learning and growing together who were taking joint action as well as individual action. They often saw the actions of each individual needed to be orchestrated if their goal was to be achieved.

Beginning a class with dialogue causes the students to engage fully because they bring to it their wisdom and lived experience, which are validated by the sharing. Students grow to understand one another and respect the wisdom of their peers. The competition that often permeates university classes was not present in these graduate classes, and the students began to wonder why they were able to cooperate and work in mutually facilitative ways, particularly since competition was evident when the same students moved to another class. At the heart of the difference was the learning community we had established. Just as the need for conflict was gone, so was the need for competition. In its place emerged a supportive community that questioned and challenged and delved into issues to arrive at new understanding. Because students were able to use their own experiences as **entry points into the more formalized learning** in graduate school, the prior learning and wisdom gained from their experiences were validated and used as a base for new learning. Furthermore, by sharing portions of their reflections at the beginning of each class, the graduate students learned vicariously from their peers and acknowledged that everyone had something valuable and unique to offer, not just the professor. Because the student journals were quite detailed and contained reflections on their teaching experiences, I got to know the students and, was able to use the class content to respond to them and **create bridges** between their new learning and what they already knew. As a result, my comments in their journals were often quite extensive, which, in turn, caused the students to pursue their topics in even more depth and to connect their reflections from day to day. The written dialogue between us also helped the students to clarify their understanding. They found their journals to be effective study tools in which they honed their conceptual grasp.

As Edgar Schein points out, our nervous system is “a data-gathering system, an emotional processing system, a meaning-creation system and a decisional/implementing system, all at the same time” (as cited by Nelson, p. 11). However natural this process may seem, we frequently require a structure to guide conversation or thinking it through, because we are so very prone to taking thinking short cuts that eventually limit our possibilities and the possibilities of those with whom we work.

In much of our education and training we are taught to short-cut this [thinking] process and move directly to...evaluate and judge things like a poem, a political system, a person's promotional potential, or the source of a problem, without first gathering all the objective data available. We are also taught that emotional responses are irrelevant, should be avoided or repressed. Once at the interpretive level, we often stop there, never formulating a response that leads to action. (Laura Spencer, 1992 as cited by Nelson, 2001, p. 13).

When the Method of Focused Conversation was used as part of an initial workshop to develop understanding of community education, some interesting comments emerged. After the philosophy of community education was explored, we talked about the obstacles or challenges that would be faced in moving toward this philosophical approach to education. One of our senior teachers looked very pensive and then asked if she could share. She said, "I'm the problem." She went on to explain that she didn't know if she could operate in this new fashion because she was fearful and didn't trust that she could make the transition successfully. This response in a public forum of almost fifty parents and colleagues was brave, and in that brief time space, the group moved from learning about community education to beginning to work with the principles of community education. Her colleagues thanked her for being so honest, indicating that her comments reflected some of their own mixed feelings. There was a great deal of support for this teacher, and the group came together in a way that demonstrated it would work as an integrated team in which honest, 'red hat' responses were not only necessary but welcomed. Because this teacher dared to share her personal experience and emotional reactions to this change, she opened an avenue of discussion that would enable the school community to negotiate the changes successfully. They now realized that they would have to keep in touch with people's feelings and emotional reactions to the changes in thinking, values, and operating espoused by a community school philosophy. They knew that they would not only need to 'do' some new things but that a huge amount of support was also going to be required in taking on these new behaviours that required changing their thinking about their role and the role of community in education. They would have to learn how to 'be together' in new ways that could ultimately enable them to implement change in a way that supported individuals as they worked through their fear and uncertainty to a space of **hope, support and possibility**.

Negotiating the Paradigm Shift: From Me to We



In many ways, the change to a community education philosophy was going to require a whole paradigm shift, or a new way of thinking and acting. Frijof Capra, a Viennese scholar now working at UCLA Berkeley, developed the notion of a **social paradigm shift** based on Thomas Kuhn's work on scientific revolutions. Capra defined as social paradigm as a:

A constellation of concepts, values, perceptions, and practices shared by a community, which forms a particular vision of reality that is the basis of the way the community organizes itself (Capra, 1986, p. 3).

Capra suggested that a profound paradigm shift is required that moves us from the present individualistic focus to one focused on interdependency. He termed this new reality **deep ecology** and indicated that “deep ecological awareness recognizes the fundamental interdependence of all phenomena and the fact that, as individuals and societies, we are all embedded in (and ultimately dependent on) the cyclic processes of nature” (Capra, 1996, p. 6). He went on to suggest that shallow ecology is human-centered, but deep ecology doesn't separate human beings or anything else from the natural environment. “It sees the world not as a collection of isolated objects but as a network of phenomena that are fundamentally interconnected and interdependent: humans [are viewed] as just one particular strand in the web of life” (p. 7).

The crises or problems that appear to be surfacing in great numbers, Capra suggested, “must be seen as just different facets of a single crisis, which is largely a **crisis of perception**” (p. 4). What he felt is needed is a radical shift in our perceptions, thinking and values. The nature of this shift will lead people from away from self-assertive ways of **viewing reality** towards a more integrative perspective. Our **thinking** will move from a rational, analytic, reductionist and linear processes to those that are more intuitive, holistic, nonlinear and marked by synthesis. A similar shift will occur in our **values**, taking us from an expansionist, quantitative, and competitive system marked by domination to one that conserves, is cooperative and focuses on quality and partnership (Capra, 1996, p. 10).

Notice our journey. We had now moved from a search for specific strategies that we could teach our students, to realizing that the learning of those strategies was itself developmental, to a notion that we needed strategies that focused not just on what ‘to do’ but ‘how to come together,’ to the realization that we had to build common ground as a basis for joint meaning-making and decision-making, and that we needed to form community while doing it. Fundamentally, we had to acknowledge that a change was needed in the way we perceived ourselves in relation to the world and what we were teaching. As we tried to negotiate the shift from a world focused on individuals to one focused on interdependence, we realized that we had much more to experience and understand about how to create and sustain a learning community.

One of my graduate students helped me to understand this when she asked, “What's so different in this class? I'm in many classes with these same students and we are highly competitive, but when we come in here, we're different, we work together.” She went on to note that in this class they could dare to be vulnerable, even wrong, because they were searching for understanding that would inform their

practice. I knew the answer to her question was at the heart of what we needed to explore and it would require understanding how **context** affects the nature of relationships that operate within it. She seemed to be indicating that a safe place was being established where the typical competitive responses were not operating. I remembered Judith Langer's work (1995) and her description of **safe houses** as places that not only provide security and are based on trust, but also encourage risk taking. She was suggesting that this ought to be what schools are. Schools should not be like the contact zones outside the safe walls that schools provide.

Langer's work centered on interactions with literature in which comprehension is "the development of 'meanings-in-motion,' meanings that contain questions as well as already-formed ideas that change over time" (1997). This 'meaning-in-motion' notion she called **envisionments**. Her eight-year group of studies describes the ways people make meaning:

People gather ideas as they read, write, or speak; they call upon a variety of options (I call them stances) that offer them qualitatively different perspectives into meaning. The stances are:

- **Being Out and Stepping into an Envisionment** - When reading, for example, we try to gather enough of what we know from our knowledge and experiences to begin to develop an envisionment from which ideas can grow.
- **Being in and Moving Through an Envisionment** - As we think, read, write, and discuss, we become more immersed in developing our ideas — ideas from the text and experience beget still others.
- **Stepping Out and Rethinking What One Knows** - Here, we use our developing ideas as a way to rethink and add to our experiences or knowledge.
- **Stepping Out and Objectifying the Experience** - Here we distance ourselves from the ideas we have created and reflect back on them, sometimes analyze them, and make connections.

(Langer, 1997 <http://cela.albany.edu/reports/think/main.html>).

Langer viewed students as "lifelong envisionment-builders, diversity the norm, [and] thoughtful discourse as provocative" (1997). Could not her ideas be applied to our learning communities? Could the envisionment encompass the meaning we were making in focused conversations through use of informational texts, lectures, and sharing of personal experience, or story? I introduced the notion as a way of helping students sustain meaning through a whole literature experience. They found it a helpful organizer for other strategies that would assist students. When I made the link to our meaning-making, there was an 'ah-ha' moment when they realized that we had to **bridge** into this kind of discourse, sustain our collective meaning-making capacity throughout, then link what we'd learned to our previous individual and collective understanding. The final, objectifying step could cause us to make the big links in more generalized terms. We realized there was a fit, and Langer's ideas could help us build our process further.

Here are some of the things that we learned:

- Starting with the **Objective Level** is a way of bridging into this collective experience; the objective level sharing enables each individual to create a context for what will follow.

- **Moving through** means that we really have to listen to each person's contribution and not be thinking about our reactions. In effect, we must receive each contribution as a gift. There may be give-and-take when more detail is needed to clarify, but judgments are not made.
- The **moving out to clarify what we know** is a shift that corresponds to the Interpretive Level of the Method of Focused Conversation. Just as texts lean on other texts, our meaning-making leans on a range of other experiences, some direct, others indirect, and some vicarious.
- Finally, the **moving out and objectifying** forces us to move to a more generic level. It affords us the opportunity to think about principles that guide and shape what we are; it is what will enable us to move from the specific to the general. Bruner (1963) notes:

*The continuity of learning that is produced by the ...transfer of principles, is dependent upon mastery of the structure of the subject matter....That is to say, in order for a person to be able to recognize the applicability or inapplicability of an idea to a new situation and to broaden his learning thereby, he must have clearly in mind the general nature of the phenomenon with which he is dealing. The more fundamental or basic is the idea he has learned, almost by definition, the greater will be its breadth of applicability to new problems. Indeed, this is almost a tautology, for what is meant by 'fundamental' in this sense is precisely that an **idea has wide as well as powerful applicability** (p.18).*

Reflection, through use of the strategies described above, nurtures the drive to find these principles. Higher order meaning, found in the principles that Bruner describes, has the power to clarify and put into perspective lower level learning. These principles will drive students to investigate the literature as well as their individual and collective wisdom because they have the deeply satisfying power to **orchestrate old and new knowledge** and provide a **solid base for informed action**. In this search for meaning, we realized that there was nothing as practical as good theory and, conversely, nothing as theoretical as good practice. This realization is what will allow us to use what is learned in one classroom or setting in a broader range of settings and contexts. It is what makes us team and enables group, not just individual, movement toward goals. It also keeps us asking the questions, "What makes this work? How does it work? For whom does it work? Under what circumstances does it work?" It leads us to the higher level principles that capture the **structure of the discipline** and have huge **explanatory power**.

In a **paradigm shift**, it is these underlying principles that change, and it is precisely why the times in between paradigms are both open to possibility and fraught with difficulty. The explanatory power and the clarity that these principles bring are gone, and chaos is common. The principles are powerful vehicles for the processing of incoming data because they provide an organizational framework for new learning. They are robust and because of their power, they are quite resistant to change, especially under threat. Therefore, if change is our goal, and if it requires a paradigm shift, which connotes operating with a different set of principles, the environment will be critical. The **environment for change** must be safe, filled with trust, mutually supportive, and accepting of 'mis-takes' in the implementation of new ideas.

- The process could be used with a reading, a story, an experience, or a lecture; in other words, it's transportable across a variety of input media. However, it requires active meaning-making that is further enhanced when it is collaborative.

The use of stances clarified the **cognitive shifts** that need to occur in the same way that the different coloured thinking hats and the levels of the focused conversation provided greater clarity. However, stances were perhaps even more explicit in their suggestion that these shifts are movements, much like those in a symphony, each unique and yet contributing to the beauty and overall quality of the whole. The shifts also involve bridging between the parts of the whole process, because distinctly different actions are required. Practice with adopting stances demonstrated that these processes are recursive rather than linear; we often need to go back to ensure that what we're thinking is warranted. As we used this approach, we tended to add the Decisional Level to the fourth stance because it has a way of pointing us to action, more specifically — thoughtful action, rather than simple reaction to an issue.

Small Worlds and the Theory of Networks



As I delved deeper into what was happening and looked for an explanation in the literature, the field of **small-worlds** arose and provided an explanation of how knowledge exchange on a broader level actually occurs. Small worlds enabled us to see that what we were doing in these individual classes could actually have a more pervasive effect. It is the idea that a **hidden pattern** is the key to how networks **interact and exchange information**, whether that network is the information highway or the firing of neurons in the brain. Buchanan (2002) suggests that:

All it really takes is a few long-distance links or superconnected hubs, and there you have it - a small world. No doubt this simplicity explains why this kind of network appears in the architecture of everything from the human brain to the web of relationships that bind us into societies, as well as the languages we use to speak and think (p. 208).

Buchanan describes these ideas with respect to many areas, but when he applies them to the social world, the following understanding emerges:

The small-world network, in the social sense, seems to be a beneficial mix of both clustering and weak links that tie distinct clusters together. Clustering makes for a dense social fabric and allows the formation of social capital, which in turn helps to promote efficiency in decision making. At the same time, weak ties keep everyone close in a social sense to the rest of the community, even if it is very large, which enables each person access to the diverse information and assets of the larger organization. Perhaps organizations and communities should purposefully be built along small-world lines.

Indeed, it begins to seem as if the small-world idea is struggling to express some still deeper insight about how to live in a complex world. At its core lies the idea that too much order and familiarity is just as bad as too much disorder and novelty. We instead need to strike some delicate balance between the two (p. 207).

These ideas seemed hauntingly familiar. As I grew to know my students, it became apparent that they were part of tightly clustered hubs which had been developed through years of working with colleagues. As the students talked about what they were doing with the knowledge they were acquiring, I understood that this university class had created the possibility of forming a series of weak links between all the strong tightly clustered hubs that already existed in the students' lives. The degree to which we could create a hub in the class was the degree to which the class itself could act as a **conduit for sharing the rich wisdom and experience that each professional brought**. The power of what was shared appeared to be strengthened significantly if the students in the class were powerfully engaged in meaning-making and if the learning was relevant to their own personal contexts. If we had a vehicle in the class for sharing, the learning of individuals could create vicarious learning experiences for others and thereby extend the impact of the class. The idea that there are only six degrees of separation means that "I am bound to everyone on this planet by a trail of six people. It's a profound thought" (Guare, 1990). It literally means that we are highly interconnected.

The following ideas from 'small worlds' theory appeared to be particularly relevant and could not only inform our work but also provide interpretive guidance and clarity:

- While **clustering** is very functional for the individual and is characterized by strong ties, too much clustering means that you are “protected from differing norms, and also from truly novel ways of thinking, patterns of behaviour, or pieces of information” (Buchanan, 2000, p. 204). In other words, it could potentially hamper green hat thinking.

The most productive group is one in which differences and novel ways of thinking are celebrated and conformity is not the norm. It is necessary to nurture relationships but avoid homogenizing the thought processes. Senge's notion of encouraging personal mastery or continuous learning ensures that the richness of individual perspectives are not lost, notwithstanding the need to create common ground for our focused conversations. I saw that the **strength** of what was happening **remained in our diversity** and we should not seek to diminish that in order to build a **place for dialogue**. Nor should we implicitly suggest that belonging in the group is determined by conforming. These two needs, **common ground** and **diversity**, had to be held in **creative balance** for our work to be most productive. This balance was facilitated by having students engage individually, through their learning logs, with the professor and then using these rich interchanges to inspire dialogue at the class level.

- **Connectors** are people with many **weak ties** who help to “link together distinct highly connected clusters” (p. 204). In fact, a few ‘weak’ links between clusters serve to keep the whole world small” (p. 199). Students reported that they were talking with their school staffs and administrators about what they were learning and its effect on how they were organizing for instruction and on some of their core understandings about teaching and learning. Each class member had a range of weak ties in the community as well as strong ties within their community and profession, and they were developing a range of links in the university class. As a result, they functioned as connectors and were able to facilitate the flow and exchange of information. Students came back to class with questions from their peers and administrators, so we knew they were an **effective conduit of information**.
- Research has indicated that if the **density of weak ties** is below a certain threshold, “the information might well never break out past a small percentage of the population” (p. 205). If this finding is right, then the lack of weak ties, which have the potential to cement small worlds or hubs together, could lead to a “lack of trust and social capital which, in turn, could save... [them] in times of crisis” (p. 205). In other words, we have the capacity to function in tightly clustered hubs where common ground is reinforced, but it is our ability to reach out to hubs different from our own that could lead to new understanding and ultimate transformation in times of crisis.

In one of our classes we examined the report of the Task Force on the Role of the School (Tymchak and SIDRU, 2001) and discussed how it was related to the *Directions for Diversity* exploration of the special needs of all our learners (Saskatchewan Special Education Review Committee, 2000). In both reports the school's and the teacher's roles were seen to be

changing. Teachers were being asked to play two roles: continue to be members of tightly clustered educational circles, or stovepipes of operation, and concomitantly, reach out to other sectors and consider other perspectives so that the school could operate as 'the hub' through which other social services could be delivered in order to meet the whole range of human needs, not just the academic ones. This new vision caused professionals in all sectors to re-examine their roles and the way in which they worked with each other.

These **new lenses** afforded by this vision was remarkable, if teachers could develop **interprofessional practice** rather than draw others into their way of operating. The new lenses afforded by this vision created some dissonance for teachers initially. However, the lenses called for interprofessional practice rather than the **assimilative** process of drawing other professions into "our way" of operating. When the child was placed at the centre, the need for a new paradigm of operation was clarified. All the human services were being called to examine how we could **work together differently in order to make a difference** in our collective **capacity** to support children, youth and their families.

- The deeply human need to **belong** must be understood and utilized in creating community.

*There is a deep **need to belong**, some suggest that it is the soul's deepest longing to be valued for who you are and to be able to discover who you are in the shelter of others. This need however basic must not drive individuals to conformity, suppress their unique talents, or result in failure to realize their unique potential. Rather, it must create an environment where individuals can flourish as a result of the intimacy of strong bonds where **trust** can develop and, at the same time, grow because of the different perspectives and viewpoints that the weak ties stimulate. This is the power of dialogue – it has the capacity to change both groups and it is the kind of communication required for systemic social change (Nosbush, 2006b, p. 11).*

If the university class could offer a place where students felt that:

- They were valued for the wisdom and lived experience they brought;
- They were validated for the gift they were to the group;
- They could continue to learn and develop; and
- They could change some of their ideas and ways of interpreting what they were seeing in the schools without feeling that they had been 'wrong' previously,

then I reckoned that we would **establish the class as a learning zone**, a place where they could trust enough to risk growth and change, what Langer calls 'a safe house'. Threat and competition would dissipate this safe house, ultimately robbing the students of their collective power as professionals to consider new ideas and new possibilities.

- In **successful communities** "ideas, capital and people flowed not just within single companies but between companies" (Saxenian, 1994, as described by Buchanan, 2002). The learning community I wanted to establish in the class could become a place like this, in which all the teachers shared their ideas and were enriched rather than threatened by that sharing. Furthermore, our capacity to create a new hub through which a range of weaker links could be established between and among the schools and other networks these teachers were a part of, fulfilled a

core function of the university, that is, to facilitate learning for the whole community.

- In a “**clustered network**, most of the links between people are strong links, endowed with history and cemented with frequent interaction”. There is a great deal of shared experience and proximity that together “build ethical feeling and shared norms” (Buchanan, p. 202). This promotes the development of **social capital**, which is the “ability of people to work together easily and efficiently based on **trust, familiarity, and understanding**. The importance of social capital lies in its power to create efficient networks for transaction” (p. 201). John Naisbitt contends that “networks offer what bureaucracies can never deliver – the horizontal links...[they] cut across society to provide a genuine cross-disciplinary approach to people and issues” (1984, p. 219). Furthermore he suggests that there are three fundamental reasons why **networks** have emerged “as a **critical social form**” today:
 - The death of traditional structures,
 - The din of information overload, and
 - The past failure of hierarchies (1984, p. 220).

Because the strength of some of our traditional networks, such as family, church and neighbourhoods, are dissipating (p. 220), the gap, according to Naisbitt, is being filled by these new networks. As Marilyn Ferguson puts it, they are “the spontaneous modern-day equivalent of the ancient tribe” (as described by Naisbitt, p. 221). They also fulfill “the high touch need for belonging” in a world where technology seems to lead the way (p. 221). In other words, they provide the **social contact that must balance the use of technology**.

Some suggest that “children may represent the accessible ‘common ground’ upon which families, communities, and child developmentalists can support each other in creating a better, stronger, healthier future. It may be that the basis upon which we can realize that ‘it takes a village to raise a child’ is an appreciation that perhaps ‘**it takes a child to raise a village**” (Pence, 1999, p. 336). Children draw us in, especially our children and youth with special needs. It is their capacity to focus us and “to crystallize our efforts that puts all else into perspective” (Nosbush, 2006b, p. 12).

- **Trust**, according to Fukayama, is an **intangible form of social capital** that can be defined as follows:

a capability that arises from the prevalence of trust in a society or in certain parts of it. It can be embodied in the smallest and most basic social group, the family, as well as the largest of all groups, the nation, and in all the groups in between. Social capital differs from other forms of human capital insofar as it is usually created and transmitted through cultural mechanisms like religion, tradition or historical habit (1995, p. 26).

Working with others has been a necessity in special education, because many different types of expertise are needed in order support children with special needs. However, each of these different sectors and professions had its own way of ‘doing business’, its own view of what counted as evidence, and its own protocols for operation. For us to successfully support children and youth with special needs across the years of their development, we need to explore how to develop trusting relationships with parents, youth, and other

professionals. It has not always been a smooth road of discovery because the stakes are high – the ultimate welfare of our children and youth. However, the small worlds concepts assists considerably.

- **Horizontal relationships** may “involve **trust and cooperation**, and **vertical relationships power and compliance**, well beyond what individuals’ incentives can explain. Trust and power drive a wedge between interests and action” (Buchanan, p. 200). Coleman, a sociologist, and Fukayama, a political scientist, describe a **determinant of economic success** that many traditional economists do not even consider – **trust**. They contend that “the ability of a nation, a community, or a company to compete economically is instrumentally influenced by the inherent level of trust among its members”; trust is an intangible form of social capital (as discussed by Buchanan, 2002, p. 201). We acknowledged that trust had to be at the base and the heart of our working relationships with students, parents, administrators, other professionals and the general public. It would determine our success because once established, it enabled us to reach out and try new things together – in other words, begin to work at the edge of possibility.

These core ideas about networks, or small worlds, provided insight because to some extent, each class or classroom has the potential be one of these small worlds. To the degree that it does, the class or classroom can develop the trust necessary to move forward together. However, what classroom members learn and discover cannot be shared unless this small world has links to other small worlds through a series of weak links. Overall, it could be said that our class was successful in enabling:

- The formation of a series of **weak links** between the contexts of each of the students;
- The reinforcement and validation of **strong links** in their original contexts as a result of the sharing;
- The **formation of strong links within the class**, evidenced by the fact that a number of students remained in contact after the class and continued their joint work;
- **Awareness** of the issues and their complexity **through dialogue** about learning and development in children with special needs. Because we adopted the stance that what we were learning could apply to all children to some extent, this learning could be **transferred** to understanding the range of needs in general classrooms as well as in special populations;
- **Understanding of the function** of individual agencies as well as their collective capacity. As a result of increased awareness, there was a better understanding of children and youth as well as the strengths that each agency could pay forward.

Gladwell (2002) notes that **three types of people** are essential for **strategic action**. In our interactions we saw all three types, although to some extent, it is necessary for special educators to function in all three ways to be maximally effective:

- **Mavens** are the data banks or sources of information;
- **Connectors** provide the social glue or conduit through which information is exchanged; and
- **Salesmen/women** have the skills to persuade. They have an indefinable trait, “something powerful and contagious and irresistible that goes beyond what comes out of [their] mouth, that makes people who meet [them] want to agree with [them]. It’s energy. It’s enthusiasm. It’s charm. It likeability...yet it’s something more” (p. 73).

The class facilitated the development of knowledge, not just the gathering of data or information. From the work on small worlds we learned that it is our connections, that is, the **relationships** we form, that are the basis for exchange of information and ideas. Through the strategies we utilized these social relationships were enhanced. The development of innovative ideas can be very powerful in strongly knit hubs, but these ideas will not change the world unless they are exchanged through a series of weak links with other hubs. The metaphor of a honey bee is particularly apt. It is an integral member of the hive, but it is the bee's travel to other worlds that enables it to return to the hive with food. Moreover, in these 'weak links' to other worlds, cross-fertilization occurs, enabling those other worlds to benefit as well as the original hive, or hub. The paradigm shift from individualism to interrelatedness and the notion of small worlds helped us to understand how we live, love, learn and discover our human being in the shelter of each other. However, we had still not addressed the power of the stories we heard daily.

Storytelling



Storytelling is the most powerful organizer for human experience. It is the narrative thread of our personal experience, describing “not what literally happens, but what we make out of what happens, what we tell each other and what we remember” (Baldwin, 2005, p. ix). Some suggest that “we make the world fit into the story we are already carrying. This unceasing interplay between experience and narrative is a uniquely human attribute. We are the storytellers, the ones who put life into words” (p. ix).

Because we have such a natural tendency to use narrative to make sense of our experiences, we need to ensure that before we interpret an experience in story, the objective level is verified and our own emotional reactions and tendency to interpret using our lived experience are made conscious. The Method of Focused Conversation has the power to do precisely that. Its structure has a way of making us conscious of our reactions and assumptions. Because the method invites sharing experiences, we can understand why some have suggested that “story is the foundation of relationship....with words alone we can create connection, establish community. With words we can recognize ourselves in each other’s lives (Baldwin, p. ix).

In the graduate classes I taught, students’ experiences were related in the form of stories, which also recorded their emotional reactions to those experiences. That is precisely why it was so difficult to get the students to focus on the objective reality. What the thinking hats approach, the Method of Focused Conversation and the use of stances as outlined by Langer enhanced was the students’ capacity to **reflect** on these stories in a way that did not destroy their internal integrity. Instead, these strategies facilitated **examination through a series of different lenses**. The process was definitely metacognitive in nature but it had parameters that enabled the class to have conversations that facilitated different kinds of thinking about stories and different ways of revealing the depth of information in them. Baldwin suggests that this is the **time of the storycatcher**:

Storycatchers come whenever we are in crisis to remind us who we are. Storycatchers entice our best tales out of us. They turn with a leading question, a waiting ear, and their full attention. In return, we speak...we write...and we are heard. Storycatchers invite the stories we most need to come forward into the community. Storycatchers know that the mix of wisdom and wit and wonder that spills into the room in story space will reconnect us (p. xii).

Stories were, and had to become, an even greater part of our process because they encapsulated the deep meaning. Our ways of being together, analyzing, and synthesizing the meaning of stories would enable us to **derive fuller and deeper direction for our practice**. At the same time, the stories would satisfy our need to belong, because they would reflect back to us who we are.

As humans we are categorical people; our capacity to operate in a highly complex world demands it. If we can categorize something as an example of ‘A,’ we can call up a script for how to operate with ‘A.’ This process of categorization enables us to attend to certain attributes and ignore others. Although this is helpful, we can overplay this way of operating and soon find that we live in a world of ‘us and them’

and 'either/or'. In this world, the relationships are simple and linear. As the earlier discussion of deep ecology suggested, this basic way of perceiving is in crisis.

In the area of school libraries, we also have categorical ways of dealing with information. In fact, we organize our libraries around whether items are fiction or non-fiction as if the distinction between the two was exact, and in so doing, we fail to realize that nonfiction grows out of story; it is just honed and polished through years of talking about many stories.

When there is a disconnect between our stories and the way in which we take meaning from them, and the way we encapsulate meaning in them, the **very centre of an information society can become hollow**. With this in mind, I realized that I needed to find ways to get graduate students to tell their stories. I wanted to invite them into the process of individual and collective meaning making by saying, "Come into these stories and listen for what will connect your life, and mine, and ours" (p. xii). Baldwin reminds us of three profound attributes of story:

- How we make our experience into story determines how we live our personal lives;
- What we emphasize and retell in our collective story determines whether we quarrel or collaborate in our community; and
- What we preserve in larger human story determines what we believe is possible in the world (pp. x - xi).

It really is all in the telling! Could this most powerful way of interpreting and making ultimate sense of human experience help graduate students to see special needs children and youth in new ways that emphasize their promise? Could we begin to see our role as helping all children to realize their promise and mobilize their mastery rather than resorting to focusing on what was not present or what was lacking in their learning? Could the way in which we were encouraged to tell and interpret the stories of our lives open an **avenue through which new individual and collective wisdom could flow**?

The Method of Focused Conversation, the six thinking hats and the use of Langer's stances provided vehicles for this reflection and students were already using story in their reflection logs. We began to see how stories rest on other stories, something we in libraries refer to as **intertextuality**, although Capra calls it interdependence. Could this capacity of stories to lean on other stories be the way in which we could make new individual and collective sense of our lived experience? In so doing, could we discover the times of paradigm shift, although they may seem like chaotic times, where there are no set rules to guide interpretation of data, are also a time of opportunity that would enable us to live on the **edge of possibility** and look upon this as a **time of great potential**. Naisbitt describes it like this:

Although the time between eras is uncertain, it is a great and yeasty time, filled with opportunity. If we can learn to make uncertainty our friend, we can achieve much more than in stable eras. In stable eras, everything has a name and everything knows its place, and we can leverage very little. But in the time of parenthesis we have extraordinary leverage and influence – individually, professionally, and institutionally – if we can only get a clear sense, a clear conception, a clear vision, of the road ahead. My God, what a fantastic time to be alive! (1984, p.283).

What is it that helps to **orient us**? It is our ability to **catch stories** – individual stories, family stories, community stories, and organizational stories – that assist

us in the process of orientation. As the literature on attachment has revealed, when you can't orient yourself to what is deeply meaningful and significant to you, you fragment and cannot develop an integrated sense of who you are, nor can you move out and explore the world and learn and develop as a result of that exploration.

Toke Paludan Møller, a citizen of Denmark, believes that there is a strong need “to **crack open the unconscious space....and hold open a conscious space** for people to jump in and **find the story**” (as described by Baldwin, p. 168). In this space, a creative tension or balance must be found between the now, which consists of real people working in real time, and the purpose, which is the basis for the now because it is “the initiating energy that set the organization into being” (p. 169). He talks about this creative balance as a dance, going on to suggest that when conscious time is made for the purpose story, it is possible to discern whether or not it is “being reinforced, shifted, changed, sustained, ignored, or undermined. If the purpose story is tended, people's day-to-day stories reinforce it successfully; when it is ‘lost, misrepresented, or hoarded by leadership’ ‘the day-to-day stories speak of frustration, abandonment, and fragmentation” (p. 171). Let's examine the attributes of these two types of stories:

- **Purpose stories** are vision based. They form the foundation of, and are part of, the essence or tradition of an organization. They're thoughtful, recorded in some way, lasting and slow to change. They are focused on the context, and are frequently expansive. They're objective, open-minded, stable and centered on the service, constituent or market for the organization. As a result, they are stable and deliberate.
- **Now stories**, on the other hand, are quixotic, innovative, reactive, interactive, adaptable and quick to respond. They're emotional, verbal, ephemeral, subjective and frequently opinionated. They're relationship-based, territorial, and short term, tending to focus on the organization rather than the context. They are also self-involved and task-oriented (Baldwin pp. 169-171).

As their names suggest, now stories are reactive and respond to the moment while purpose stories sustain the long term essence of the organization (Baldwin, 2005, p. 170). Together they balance. They provide point and counterpoint, fulfilling their ultimate functions when there is a **tension or dialectic between the two**. If change is not to dissipate into chaos, this balance must be maintained and lead to **synthesis**. There is a continuing deep need to balance these two types of stories because “[t]he purpose without the now is history; the now without the purpose is chaos” (p. 173). It is precisely that chaos that is creating such stress and anxiety in our world today.

A brief word about the Saskatchewan context will demonstrate this point. Tymchak (2001) referred to our current situation as a massive shifting of tectonic plates and described a number of forces that were shifting the role of schools – their purpose story. Although everyone knew that it was necessary to re-examine the role of schools based on the major shifts occurring in society, what resulted was a **paradigm shift**. We had to acknowledge that the way we had defined schools and their role was no longer a good match with reality. It was time for this re-examination, and there was extensive consultation throughout the province. What resulted was a new formulation of the purpose story of schools. Schools would no longer focus exclusively on the academic needs of children; they were now to become the portal through which other social services were delivered. From this

altered and expanded role, the vision of School^{PLUS} emerged. It articulated how the **school was to become the hub in neighbourhoods**, working not only with school age children but also with the whole community to increase opportunities to learn for all. At the same time, *Directions for Diversity* emerged as the way in which schools ought to respond to the many needs of children with particular emphasis on special needs populations. To add to the feeling of chaos, all major curricula had changed in the past decade. Is it a wonder that many felt disoriented and could not fully understand what was happening?

The role of story in times of change is particularly relevant. Toke suggests that it is the **good question that cracks the space to enable the stories to emerge** but something needs to “hold people in the **chaos of coming awake**” (p. 180). Baldwin suggests that the tools for this changing world are “**each other, a good question, and a willingness to be present**” (p. 187). Moyers puts it another way, “What we need is what the ancient Israelites called *hochma* – the **science of the heart**...the capacity to see, to feel, and then to act as if the future depended on you. Believe me, it does.” (as cited by Baldwin, p. 185).

It was now easy to see what the **grand conversations** in these graduate classes were really about. They were about creating space for stories to emerge, ensuring that these stories, both the purpose and the now stories, would have a strong, safe space that was supportive, enabling and connected to the rich hubs or communities from which they came. The class provided:

- Space for the unconscious, and then the conscious, stories to emerge;
- Tools for dialoguing about these stories;
- An avenue for input from all those in the group; and
- Space where the ‘lecturettes’ I prepared could touch students’ heads and hearts. These lecturettes provided direction for the students’ action because, instead of being delivered from the outside, they responded to the deep questions that arose from their purpose and now stories.

This is what Vygotsky called the **zone of proximal development**, or the learning zone. The class became that space where there is safety and support but where students **operate at the growing edge of their competence**. It is not a space that operates on what students do not know; rather, it emerges because of **what they do know** and uses that to venture to the **edge of possibility**.

Knowledge Exchange



One of the key challenges in any community is to discern how to **mine the rich lived experience and wisdom** of the members and institutions in that community and then blend those findings with the research literature in order to form a solid base of action. In other words, the challenge is to engage in evidence-based decision-making, which is more than, but certainly includes, what we call ‘best practice’. In light of Baldwin’s work and because of our lived experience, we knew that this process would involve telling the ‘now’ stories, but we needed to explore precisely how the telling would occur.

At this point my work as the Community Research Coordinator for Understanding the Early Years was moving beyond the collection of baseline data. Phase II of the Understanding the Early Years initiative required sharing the information with the community. The five research coordinators across Canada who were involved in the initiative used the term **Knowledge Exchange** to describe this sharing, but we were trying to formulate what it meant in practice. How was it that one went about sharing the research information and the local statistics with the vast range of community groups and professionals in a way that would catalyze action or response in ways that improved developmental outcomes? As I began to share with the community, stories emerged, and so did a range of questions. The key to this kind of sharing appeared to be a statement I always made at the beginning of presentations:

There are two types of knowledge – one gained from formal research and one that emerges from lived experience. Both lead to wisdom; one is not better than the other. However, when the two are blended, we have a rich base for action because we know that it both fits our context and, utilizes what others have learned more generally.

This simple statement demonstrated to audiences that their input was not only valued but **necessary**.

I also discovered that the sharing sessions were more productive when they involved a **small intact group**. (Buchanan would call these tightly knit hubs implying strong ties.)

As sharing proceeded, the question became how we could use the wisdom and lived experience gained in each exchange to support subsequent exchanges. A process was born that we came to call **‘Pay It Forward’** after the movie of the same name. ‘Pay It Forward’ involved making notes on chart paper and constructing flow charts of the recommendations from each group. The essence of these notes and charts was shared during subsequent Knowledge Exchange sessions. Finally a group of about 40 people broadly representative of the community gathered for an entire day to synthesize the accumulated information using four categories to sort the responses: strengths, challenges, needs, and opportunities. This information put together by the community group was used as a basis for a community action plan for children in the early years.

These sessions were **times of grand conversation** in all areas and sectors within our community. They began with introductions and a description of the process we were using. A 30 – 45 minute powerpoint presentation entitled “What

Will the Future Hold?” then presented the research data in the context of a birth cohort. I described the international and Canadian scene in terms of support for human development, stating, “If nothing changes, this is how the birth cohort this year will evolve....” I went on to describe all the developmental outcomes, contextualizing, wherever possible, the local data in relationship to the provincial, national and international data so that audiences could make relative sense of it.

The birth cohort notion was developed after consultation with the Early Childhood Management Committee that oversaw my research initiative. Naisbitt suggests that **“the life channel of the information age is communication”** (p. 14), but also notes that there is an ever present danger of “drowning in information but [being] starved for knowledge” (p. 17). Because each person had a story, a story they had in fact lived in a birth cohort, the **reference point** was valid and meaningful to the group.

I ended the session by talking about the promises we need to keep to children and reminding the group that these were not theoretical children. The group would see them on the streets, next door, and in their neighbourhoods as they left the session.

The two-way flow of information was enriching. The community’s heart, hopes, concerns and dreams were ‘paid forward’ for us to use as a basis for our action. People asked good questions like, “What are the thinkers saying in this area?” And then, they would add their own stories and ideas. These conversations continued long after the presentation in each of the small groups. It was almost as if the presentation started a process that continued; sometimes the same group would ask to have an update since the evidence base was updated and expanded regularly. Although there were many poignant sharing sessions, I will describe just two.

1. Hunger and Food Security Coalition

Prince Albert has an active Hunger and Food Security Coalition that has hosted a number of Hunger Conferences to create awareness of hunger in the community and gather ideas as a base for action. At the coalition’s latest workshop, I was asked to do the presentation on the future for the birth cohort, including some ideas on food security. About 100 professionals, parents and community members gathered for the day-long workshop. My presentation provided the framework for the day and led to some very involved discussions about food security. Many times people referenced the information about our community and its children, demonstrating that a community wants and needs to know the state of affairs. However, they also need to have this information delivered in a way that is filled with hope and possibility for the future. Having an accurate picture of ‘what is’ enables you to consider ‘what might be’ and develop an action plan that enables movement from the present reality to the dream.

2. Pine Grove Correctional Centre for Women

Another poignant presentation was given at the Pine Grove Correctional Centre for Women, where about fifteen women and five staff gathered for an afternoon of Knowledge Exchange. From the outset I was honest in sharing with the group that incarceration of mothers and women was not a positive outcome; however, I also indicated that no matter what, there was always hope. In every situation there was capacity to change and support was available to help people negotiate change. As I shared the data, there were tears among the participants because I was

describing trends that had affected many of these women. They told stories and engaged in a great deal of sharing. In total, the group produced six pages of chart-sized paper filled with recommendations. These women **wanted their voices to be heard** and felt honoured to be asked to participate in deriving the solutions.

Some of their comments were gut-wrenching. When a young woman, not yet 21, asks, “Is there still hope even if you have a homicide on your record?”, you know that you have touched the essence of a human being’s longing for a more positive future. Some shy women would come and whisper their recommendations to me at the break or just after the session because they so wanted their lived experience to be ‘paid forward’.

As usual, I brought a snack for the participants as a thank you and a way of honouring the wisdom that was paid forward. The snack was graciously received because people want to feel valued. They want to know that what they think is important, and that **their story can be added to the story of humanity**. By creating the opportunity and the space to share, we created the critical weak link between small worlds and enabled the flow of information and wisdom between and among these worlds, even worlds behind bars. This connection is as necessary for those people who have been incarcerated as it is for those who participate in various other ways in the community. Toke notes that he loves the word ‘democracy’ because it is derived from the Greek ‘demokratia’: “demo meaning people and kratia, meaning purpose: democracy is people gathered around a purpose” (Baldwin, p. 182). When that purpose is to support children and youth, and their families, it has a way of drawing out the best in everyone.

Knowledge Exchange demonstrated that it is the **manner and purpose for the sharing** that is also important. It demonstrated that in this kind of dialogue, **everyone teaches and everyone learns**. Each person has something valuable to offer as a gift for the creation of collective understanding.

The **Knowledge Exchange components** that appear to be critical for movement from talking to action include:

- **Acknowledgement** that the process is incomplete without the community’s wisdom and lived experience;
- **Invitation** to ‘pay this forward’, suggesting that all the voices in the community need to be heard to provide a solid base for action;
- **Demonstration** that the participants’ recommendations were being integrated and used in the formulation of plans;
- **Honouring** each person’s contribution by listening intently and receiving it as a gift;
- **Recording** the contributions and then using them in a later synthesis session;
- **Involving the community in the synthesis** rather than having it done exclusively by the Research Coordinator;
- **Creating a space** for dialogue and storytelling that was safe, respectful, and inclusive;
- **Responding to requests** for this presentation to many small groups (usually under 30 people) and **tailor-making** the presentation with respect to depth with which some of the data were shared;
- **Providing an initial presentation** that set the stage for these grand conversations;
- **Inviting the two-way exchange of information** by the way in which the sessions were conducted.

We received many invitations to facilitate a Knowledge Exchange. They came from all sectors of the community, including civic government, government line departments, community-based organizations, nurses, a community college, community groups, individual schools, school districts, three universities, and a range of first response services (ambulance, fire, police). We also were invited to give conference and workshop presentations locally, provincially and nationally. The number of invitations we received indicates a strong need for people to understand how our children are doing and a willingness to work together to create more positive contexts for their development.

At the Rockefeller Foundation they have developed a process called “**communication for social change**” and they have found that “dialogue – as a participatory form of communication...is an iterative process where **community dialogue and collective action work together to produce social change** in a community that improves the health and welfare of all of its members” (Figueroa, Kincaid, Rani, & Lewis, 2002, p.iii). In describing the interaction of social and individual change, they suggest that both are necessary. They describe four possibilities using quadrants. In Quadrant 1, there is neither social nor individual change and thus the status quo is maintained. In Quadrant 2 there is individual but no social change, and as a result, there is limited improvement. In Quadrant 3, which sees social change but no individual change, there is increased potential for improvement. However, it is in Quadrant 4, where there is both social and individual change, that there is **self-sustained improvement** (Figuero, Kincaid, Rani, Lewis, 2002, p. 13).

Although the context for their example of the process happens to be health, we can immediately see the pattern for change that could become self-winding, that is, self-perpetuating.

The ideal change process would result in social change and in the requisite individual change. We expect the interaction of these two types of change to result in self sustained improvement in health and other problems faced by a community. Every time a community goes through the dialogue and collective-action process and actually achieves a set of shared objects, its potential to cooperate effectively in the future is also expected to increase. If the process also leads to the changes necessary in individual behaviour for a community to achieve its objectives then the success of the community reinforces both collective and individual behaviour. The likelihood of a community continuing to solve problems together in the future is expected to increase. Furthermore, the confidence of the community to undertake collective action increases and the value for continual improvement is strengthened and institutionalized. The possibility for self-sustained, continual improvement can become a reality (Figueroa, Kincaid, Rani, & Lewis, 2002, p 13).

What does this have to say about our work in processing information in an information age? It suggests that change is a process, and at its best it is both an individual and a collective process. The determining feature in whether or not change is at its best is the kind of dialogue that occurs. Naisbitt (1984) noted over twenty years ago that in the move from an industrial to an information age, five key points were relevant, and these points are as relevant today as they were then:

- *The information society is an **economic reality**, not an intellectual abstraction;*
- *Innovations in communications and computer technology will **accelerate the pace of change** by collapsing the information float [or the amount of time information spends in the channel];*

- *New information technologies will at first be applied to old industrial tasks, then, gradually give birth to **new activities, processes and productions**;*
- *In this **literacy-intensive society**, when we need basic reading and writing skills more than ever before, **our education system is turning out an increasingly inferior product**;*
- *The technology of the new information age is not absolute. It will **succeed or fail according to the principle of high tech/high touch** (p. 11).*

Because in the information age we are dealing with “conceptual space connected by electronics, rather than physical space connected by the motorcar” (p. 33), there is an increased need for us to **connect with people** in this highly technical, rapidly changing society. There is a need to create and maintain those small worlds, sustain them through strong links, and interconnect them through weak links. In other words, notwithstanding the technological advances in our society, there remains a **deep human need to be part of a social context**. While technologies may powerfully assist us, they will not replace this social need. As a result, perhaps more than ever, we need to evolve processes that address our need for social contact, so that the now and the purpose stories can connect us and make sense of the many realities people experience today. Furthermore, it is now apparent that the type and quality of communication in these contexts is capable of nurturing both individual and group change.

What We're Learning Also Changes: Data Transformation



We were getting closer to understanding all that would be involved in learning in an Information Age. However, as our understanding of the process for dealing with information grew and evolved within the contexts of the school, the university and the community, it became apparent that our understanding of the product of this process was also undergoing transformation. In other words, what we were learning also changed.

Early understanding of the ways in which information is processed often suggested that the brain just replicates data and regurgitates it when necessary; this process even has a name – rote memory. However, we knew that although rote memory may be the beginning of the information-processing, it by no means captured the result of the information-processing that we were observing. Awareness of this transformation in the end product, which was gained from our work in Understanding the Early Years (UEY), helped identify the variables needed to stimulate growth and provide a way to monitor progress in all three contexts. A metaphor (metamorphosis of a butterfly) helped us to conceptualize the changes and actively discuss them with our groups.

1. **Data** (The Egg Stage)

Information is 'encapsulated', difficult to permeate, often technical and usually not interrelated. If information processing goes no further, rote memory will result, and what individuals and/or groups can do with the data will be limited.

In UEY, the data were presented during this stage in terms of a birth cohort, which proved effective because people are used to thinking about their children's peer group. Strictly speaking, even the organization of the data in a birth cohort framework already moved information-processing to the next stage. Nevertheless, the presentation of population data in terms of the area's yearly birth cohort of just over 1200 children helped the community to conceptualize the vast amounts of data provided in the initial presentation. In addition, bar and pie graphs, pictures of children from the area, storytelling, and the thoughts and words of community members were utilized when presenting this data. The latter were significant in **validating the strength and capacity within the community.**

In university classes, this stage involved all the data presented in the readings and lectures as well as data shared by the students. In school, it involved presenting the different types of strategies we were exploring as well as the content to be mastered.

2. **Information** (The Caterpillar Stage)

Data are now interrelated; the body of data becomes larger and more complex. This interrelationship of data feeds off other data and becomes integrated (the caterpillar stage).

The challenge at this stage was to discern how to interrelate data conceptually, contextually and intersectorally. The data needed to be presented in a **grounded way that suggested why and how the relationships existed and were meaningful**. For example, when the infant mortality data for our area were presented, comparisons were made to cities within Saskatchewan, cities in other provinces and the infant mortality rates for Canada and several other countries. This approach provided people with a way to understand our results in a **relative sense**, whereas providing only the local rate would have provided **no basis for comparison** or for developing understanding.

At this stage it also became important to connect the data **across sectors**. **Integrating the thinking from a broad range of sectors** provided a **framework** that our community could use to help it interpret this data as well as other data. In the early childhood area, a paper called *Growing the Future: Enhancing Developmental Health, Well-being and Competence* was developed to help those in the field understand child development and evaluate present policy, programs and deployment of resources. The paper was of use locally, regionally, and provincially in government departments, as well as by the community as a whole.

Naisbitt (1984) noted that in an Information Age one could literally be drowning in information but be starved for knowledge, so effective and efficient tools must involve selection not merely supply of information (p. 17). This reality is precisely why data alone will not suffice in an Information Age.

de Bono's white hat thinking demonstrated the two-tiered nature of factual information. As a result, people need to be able to check the credibility of the data as well as select and store the data so that it is useful. Without **careful selection and categorization**, which typifies the transformation of 'data' into 'information', the very data that could be helpful will slow down the meaning-making process and could overwhelm the entire information-processing system. As a result, the basis for higher order thinking would be very limited – limited to those who already possessed the interpretative frameworks. In a true democracy, there is a commitment to opening up the meaning-making process to the people rather than engaging only a select few.

Interpretive frameworks, while somewhat constraining the exploration of the data, also facilitate meaning-making. If there are no frameworks, all the information comes in at one level; everything has equal value, importance, and hierarchical clarity. When one begins to explore a new area, there is an obvious lack of distinctiveness among the data, but if one persists in examining the data, categories start to emerge and redundancies among the data point to the structure of the discipline. As Jerome Bruner noted, "The structure, not the content, of a discipline is the key to comprehension and retention" (1963). "When we grasp the structure of a subject, it enables us to relate many other things that would otherwise seem unrelated....The more fundamental the idea is, the wider and more powerful will be its applicability" (Matherne, 1999, discussion of Bruner, 1963). In this transformation process, it is safe to say that the data of the former stage becomes contextualized and organized in a way that enables meaning-making.

In university classes this stage involved connecting the vast amounts of information in ways that made it 'understandable' and meaningful to students.

When there is a great deal of new content, students often fail to see the links and the hierarchical way in which the data are interrelated. Therefore, it is incumbent upon the professor to create an environment in which some time and energy are devoted to creating the links that build a framework of interpretation. As Bruner (1963) noted, "It takes no elaborate research to know that communicating knowledge depends in enormous measure upon one's mastery of the knowledge to be communicated" (p.88). One might think that 'knowledge' should read 'information', but Bruner's terminology is actually correct because the professor would have to have processed and integrated the information into her own frameworks of understanding (see next section).

Processing and synthesizing these vast amounts of information can seem particularly daunting at examination time. In order to orchestrate this synthesis, I asked students to prepare no more than two pages of what I called "cheat sheets" that they could bring into the examination. These sheets served several purposes:

- They led students to **integrate information** conceptually around the broad topics they knew the exam would contain. I also provided a broad outline of the exam suggesting the areas that would be assessed and the type of questions that would be asked. For example, throughout each class I would signal to students when terminology was critical. There was always an exam question on pairs or triads of terms in which the students were asked to define the terms, differentiate between them, and talk about why the distinctions were important. There were also several questions that provided student data and asked for analysis and recommendations in a broad range of areas.
- The 'cheat sheets' **organized the information** so that it was easily used. We introduced a large number of visual organizers that helped students understand the intricacies of the relationships between the various types of data and helped them create information networks. Students reported that it was the **clarification of the interrelationships** that helped them develop conceptual grasp of the material and depth of understanding. The vast amount of data was overwhelming until the relationships between and among the data points were clarified. Providing visual organizers so that students could re-present or re-cognize the data enabled them to monitor their own emerging understanding.
- By providing an avenue where basic level data were accessible, the 'cheat sheets' reduced the stress of, and the need for, rote memorization, focusing time and attention on conceptual mastery and higher order thinking. The sheets **freed them from lower level processing and enabled higher level thinking**. Bruner (1963) notes, "Organizing facts in terms of principles and ideas from which they may be inferred is the only known way of reducing the quick rate of loss of human memory" (p. 32). Interestingly enough, students reported that this shift of emphasis actually helped them master much more of the lower order information than they anticipated.
- Because students spent a lot of time developing their 'cheat sheets' it also meant that they **mastered a great deal** of the content and could begin to explore new and innovative ways that it could be

utilized. The stress of studying was removed and it became, in and of itself, a rich context for **learning and integration of information**.

In schools, we focused on how to record data that would enable students to see relationships. This approach greatly reduced the 'copying' of information that was so common in reports and increased student capacity to deal with ideas. Through workshops we developed a range of specific strategies with teachers and teacher librarians that would help children integrate data to create information. Teachers, in turn, used these templates as tools for whole class, small group and individual work.

3. **Knowledge** (The Chrysalis Stage)

Information is now integrated with individual and collective experience and the background knowledge of the participants is incorporated. In the dialogue that is the vehicle of this stage, there is both a possibility of **changing and of being changed**. **Every voice** must be **heard** and **honoured**. **Thinking maps** were used in all three contexts: school, university and community. Here is where the value of story is so critical.

It is tempting to try and rush this stage because it is **difficult to directly observe what is happening**, since it is not only internal but also often highly individual. 'Pay It Forward' was an attempt to externalize some of this process so that the reflection could occur on both individual and group levels. **Small intact groups** were used because members **knew and trusted** one another, shared some **common ground**, and were small enough that each voice could be heard.

When this stage is negotiated successfully, there is a real urgency for action. This is what Figueroa et al. talked about as **communication for social change**. This stage is critical for informed action, because it causes people to dig deep personally and professionally in individual and collective ways in order to 'make sense' of what they have come to understand. It will undoubtedly challenge but will stop them from drowning in information and yet be starving for knowledge (Naisbitt, 1984, p. 17). There is something deeply satisfying about taking information 'in' and letting it co-mingle with what you understand. In order to regain a sense of equilibrium (as Piaget describes it), or a balanced state between the internal understanding of the world and the new information presented, i.e., an external understanding of the world, the individual or the group needs to **reconcile the new information**. It must be decided if this new information will be:

- **Ignored or resisted**, which is what frequently happens when there is a strong internal framework and the evidence is not strong enough to 'shake or disturb' it;
- **Added** to existing frameworks;
- **Used to 'fine tune'** existing frameworks; or
- Taken as a signal that **restructuring** of existing frameworks needs to occur.

The degree of change involved increases from the top to the bottom of this list. It should be noted that when the need for restructuring is signaled, the existing framework, that is, the principles that govern the organization, change. For this change to occur, the individual or group has to 'let go' of the

existing structure that organized the data. During the time of restructuring, both individuals and groups are very fragile because their interpretive frameworks have 'crashed' and they have no organizing frameworks to deal with incoming data and information, nor do they have a base for action. This uncertainty is precisely why times of change require extra support and nurturing. They are extraordinary times in which the possibilities are great, but they are also times of vulnerability in which small things can have big impact.

In this stage of data transformation we can see the **journey** that is occurring: access to data, connecting and contextualizing it to create information, and making the information our own to construct knowledge, and then utilizing knowledge to generate action. This transformation changes forever the notion of teaching as mere transmission and moves teaching into the arena of human transaction as a basis for knowledge construction.

4. **Action** (The Butterfly Stage)

The groups will now be involved in **evidence-based decision-making** and will increasingly take action individually and collectively. They will continue to revisit their decisions based on emerging data, information and construction of knowledge. As the butterfly cross-fertilizes by visiting different flowers, so too the individuals and groups gain from sharing their ideas using the Knowledge Exchange and 'Pay It Forward' processes and, by the nature of their membership in tightly clustered hubs with weak links to other hubs. In fact, participants will now realize that **assessment, evaluation and research** are not just things that you do when you have leftover funds. Instead, they are **integral to the whole process** of becoming a **learning community**, then evolving into a **smart community**, i.e., one that uses evidence-based decision-making to take strategic action and monitors the outcomes as feedback on the efficacy and efficiency of the strategies employed.

The realization that the data underwent transformation helped us to monitor progress individually and collectively and we saw how **recursive genuine learning is**. We realized that it is a thoughtful, somewhat time-consuming process, requiring careful consideration rather than reactive responses to threats and issues. Sometimes the premature movement to action, just for the sake of acting, can cost time in the long run rather than save it. The expectation for 'instant' responses that so pervades our society today can hamper these more thoughtful responses. Having said that, there is need for action; although action must be thoughtful, inaction is not an option.

Peter Senge believes there are **five new 'component technologies'** that are gradually converging 'to **innovate** a range of **organizations** (pp. 6-10):

1. **Systems Thinking**

Systems thinking is really a conceptual framework, a body of knowledge and tools that have evolved over the past half century to make the full patterns clearer. The underlying worldview is intuitive but it enables us to discern the patterns that connect and the various levels of influence. It undergirds the interrelatedness of the web of life that Capra proposed and the ecology of human development articulated by Urie Bronfenbrenner that is so widely utilized today.

2. Personal Mastery

Personal mastery is a discipline of “continually clarifying and deepening our personal vision, of focusing our energies, of developing patience, and of seeing reality objectively”. As such, it is the cornerstone of any organization. When organizations facilitate individuals working rigorously to develop their own personal mastery, the commitment between individual and organization becomes reciprocal and instrumental in the organization becoming “an enterprise made up of learners.” This reflects the notion of tightly clustered hubs that we have called learning communities.

3. Mental Models

The discipline of working with mental models involves “turning the mirror inward”, learning “to unearth our internal pictures of the world, to bring them to the surface and hold them rigorously to scrutiny.” It also involves the ability to “carry on ‘learningful’ conversations” where people ‘expose’ their own thinking and make it “open to the influence of others.” These mental models of the world are developed when children are under two years of age and evolve over a life time. They guide action, and although they can be changed, change is difficult because the mental models are the individual’s and the group’s conception of how the world works. Mental models contain those powerful principles that Bruner described.

4. Building Shared Vision

There is real skill to unearthing shared “pictures of the future” because they foster “genuine commitment and enrollment rather than compliance.” Baldwin and Toke discussed the two kinds of stories, purpose and now stories, that orient us. The shared vision comes from a deep understanding of the purpose and provides context for the now stories to emerge. If and when the purpose story changes, it can be a time of disorientation unless steps are taken to help the organization define and understand the new purpose. The Role of School examination changed the purpose story of schools, and the new purpose of schools is evolving in an environment that supports and nurtures it.

5. Team Learning

Team learning starts with dialogue, which is based on the Greek dia-logos indicating “free-flowing of meaning through a group, allowing the group to discover insights not attainable individually.” Dialogue is critical, for **unless teams can learn, the organization cannot** (Senge, 1990, pp. 6 – 10). The process we have called dialogue involves knowledge exchange and occurs in learning communities.

Only **two basic steps** are involved in moving toward a **learning society**:

- Start functioning like one as soon as possible; and
- Learn from experience as you go (Keating, 1999, p. 342).

Great care must be taken with the definition of a **learning society**. “Learning is not restricted solely to the acquisition of knowledge or skill already attained by others (as in, say, an individual ‘learning to read’ or a firm ‘diffusing its best practices’) but also includes activities better described as **collaborative knowledge**

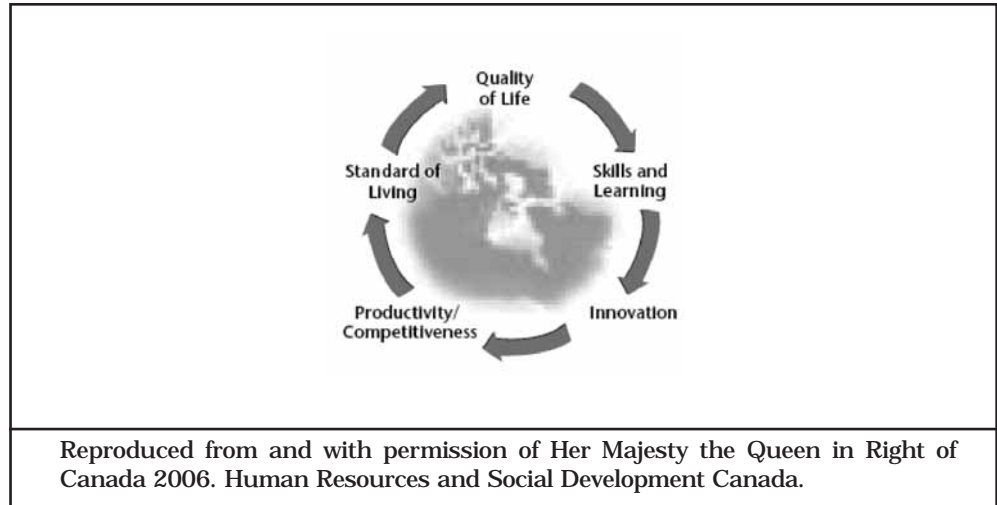
building and innovation” (Keating, p. 341). As a society we must have “well-crafted investments in human development” in order to realize the human and intellectual capital that will increase our potential for economic and knowledge innovation that will, in turn, increase our capacity to adapt successfully to a changing world. Is this not the definition of intelligence applied at the societal level? A learning society is really just a broader generalization of a learning organization, notes Keating (1999, p. 341) and as we move in this direction, Keating feels we must acknowledge that:

- **Change**, rather than being an event, is a **continuous process** and the rate of change is escalating. Our capacity to deal with change will rest on the **social and economic anchors** that provide some stability and, in even a deeper way, on our purpose stories. A period of change is the time to catch the stories and reflect them back so that people can contextualize their now stories in the context of their purpose stories. Over time these purpose stories will change as well, but the change must be collaboratively negotiated rather than imposed.
- Change can be **brought to conscious awareness** as goals are made explicit. Many of the strategies we’ve discussed help to make the underlying goal structure more explicit. As we move from unconscious activity to conscious reflection on that activity, we build a solid base for thoughtful responses that utilize evidence-based decision-making, but it is ‘knowledge’ rather than ‘data’ that needs to constitute the evidence.
- Change involves **the broader society**, not just experts. Too often we can relegate the process of change to a select few, but in an Information Age, that won’t wash. Knowledge matters because it is through knowledge that we can develop innovation. In an Information Age in a democratic nation, knowledge must not become the property of a select few; rather it must belong to the entire populace. *Achieving Excellence: Investing in People, Knowledge and Opportunity* (2002) is Canada’s blueprint for building a stronger, more competitive economy. It proposes goals, targets and federal priorities for the next decade in four key areas:
 - **The Knowledge Performance Challenge** - We need to find better ways to create knowledge and bring these ideas to market;
 - **The Skills Challenge** - We need to find ways to develop, attract and retain the best and the brightest;
 - **The Innovation Environment Challenge** - We need to look at ways to improve business and regulatory policies to support innovation;
 - Finding Ways to **Strengthen Our Communities** - We need to support innovation at the local level so that our communities continue to be magnets for investment and opportunity (p. 2).

“It is time for Canada to adopt a true **culture of opportunity and innovation**, one that will enable all of us as Canadians to get on with building better lives for ourselves, for our families and for our communities” (Business Council on National Issues, Risk and Reward, Creating a Canadian Culture of Innovation, April 5, 2000). In a companion volume, *Knowledge Matters: Skills and Learning for Canadian* (2002), Human Resources Development Canada Minister Jane Stewart notes, “Canada’s skills and learning challenge is a national priority. It’s about making sure that all of our citizens are in the best possible position to reach their goals. Canada is strong when its citizens are strong” (p. 4). Human Resources Development Canada strongly states that “**our people are our key to success**”

and we “must **do more together**” (p. 6). They developed the model below in Figure 1 to show the relationship between knowledge, quality of life and the economy.

FIGURE 1: THE RELATIONSHIPS BETWEEN THE ECONOMY, QUALITY OF LIFE AND SKILLS.



Furthermore, they suggested three key imperatives are driving us to action:

- “The knowledge-based economy means an ever **increasing demand** for a **well-educated and skilled workforce** in all parts of the economy and in all parts of the country;
- There is a looming **demographic crunch** that will exacerbate these skills shortages; and
- Our **learning system** must be **strengthened** if we are to meet the skills and labour force demands of the next decades” (pp. 7-8).

We do live in a culture of opportunity, one that requires change in our skills and in the way we relate to each other; however, we are basically being called to see the **interrelationships**, the **patterns that connect all things**. We can no longer afford to live in tiny bubbles of operation with no awareness of the complex ways in which we are interconnected.

- **Collaborative learning** is crucial to effective societal adaptation. Unless we are able to learn collectively, we are certainly doomed to repeat the ‘mistakes’ of the past and we will not be able to function, let alone be innovative, in an information society. In its essence, learning in an Information Age is about the **capacity to learn together in ways that will enrich individuals, families, communities, and nations**.

Our journey to understanding has been filled with discoveries of strategies, development, cognition, levels of interaction, paradigm shifts, small worlds, storytelling, knowledge exchange, data transformation, all leading us to the ultimate conclusion that to learn in an information age, we need to **become a learning society that houses many rich and diverse learning communities**.

Learning Communities



As the work of learning communities was developing within my university classes, our school division was also moving in this direction. My work in Understanding the Early Years was also exploring the notion of a **learning society**. Dan Keating (1999) suggested that productive examination of this notion should focus on two key features:

- “The broad capacity of societies to provide the **essential supports for developmental health** by drawing on existing resources – material, cultural, and social – to generate new approaches under shifting circumstances” (pp. 337 – 338). This is particularly important during times of rapid social and technological change that are presently being experienced locally, regionally, nationally and globally.
- The capacity of communities within societies to “take up these challenges effectively, through **creative organization of the everyday social practices** that touch directly on human development” (p. 338). We’ve labeled this as the formal informal social safety net.

Learning communities can operate within a sector and across sectors, but when they involve the whole society, we refer to it as ‘a learning society.’ Learning organizations have discovered how to:

- Create effective institutional memory (Toke calls them purpose stories);
- Engage in collaborative goal seeking;
- Realize continuous improvement (Keating, 1999, p. 341).

Keating goes on to suggest that learning organizations engage in four core activities. They:

- Investment in core infrastructure;
- Network available resources and ingenuity
- Focus on core dynamics such as timing, considering unintended negative consequences, are alert to external change that shifts the equation and, invest in research and development
- Monitor outcomes (Keating, 1999, pp. 342 – 346).

These principles are illustrated in the description given below of an **Integrated Human Services Practicum** in Prince Albert that involved a large number of the human services.

The emergence of this practicum began fairly innocently. In special education and in the new environment of School^{PLUS}, there has been growing awareness that one professional group cannot by itself meet the needs of children, youth and their families in today’s society. I’d been asked by Human Resources Development Canada to describe the Knowledge Exchange process we were using in the Understanding the Early Years initiative in Prince Albert at a national Knowledge Translation workshop sponsored by all thirteen Canadian Institutes for Health at the Medical School at the University of Calgary in early June 2003. This several-day workshop focused on how information could be passed on more effectively in this new Information Age. There were presentations from across Canada and lots of time for the participants to work together to evolve a strategy. After my presentation, a nursing professor from the College of Nursing at the University of

Saskatchewan asked me if I'd be willing to take some of her senior undergraduate students for their community practicum and if I'd also entertain the idea of working with some of her graduate students. Of course, I brought this request back to the Early Childhood Management Committee, who oversaw my project, and I also talked with my colleagues in nursing in Prince Albert. Collectively, we decided that this would be a very good idea. Since we were experiencing a shortage of nurses, responding to this request might help with nursing recruitment and maybe more importantly, it might help us to explore working more closely together to meet the **complex needs** we were seeing in our practice each day. The data that I had been putting together in my research not only came from all sectors but was also beginning to surface the fact that our stove pipe operations were not always meeting the needs of children and their families. Sometimes, as professionals, we appeared to be part of the problem rather than part of the solution. The idea of working across sectors grew so that now, three years later, students in Nursing, Pharmacy and Nutrition, and Rural Family Medicine are involved in an Integrated Human Services Practicum. As part of this practicum, we orchestrate placements in health, education, social services, justice and a number of community-based organizations as well as placements in First Nations communities and in Métis agencies. Our goal is help these new professionals, through the promotion of **interprofessional practice**, to understand how together we provide a **continuum of care and support** that many have called **the Social Safety Net**. Prince Albert is part of a Health Canada funded interprofessional project for the province called PCITE (Patient Centered Interprofessional Team Experiences).

Each term we provide a group orientation, a range of individual placements for participants in both their chosen profession and the range of community agencies described above, a series of focused conversations, a workshop that is focused on an area of interest of theirs but is attended by about 100 professionals representing all the sectors in the community, a day-long field trip to visit agencies they were not able to interact with during their practicum, and a final celebration that involves the participants providing a joint powerpoint presentation to discuss what they've learned. In our efforts to develop interprofessional practice, we work together, honouring the skills and expertise of each professional, but building a common plan of action for the client. Our motto is: **Many skills and talents for service to one community**. Whenever possible, we try to integrate services and deal with the **systemic issues** rather than just the presenting, surface issues.

The range of experiences afforded the students enables them to view the same issue using many different **lenses**, quite frequently giving them contact with the same case from a number of different professional stances. In the first year of this practicum (2003), one group of five student nurses had the following experiences with a single family:

- Mom was first encountered as an inmate of Pine Grove Correctional Centre for Women. She was pregnant with twins and was expected to finish her sentence before the twins were born.
- Mom delivered her twins in the Obstetrics Department of the regional hospital prematurely.
- These premature twins were re-admitted to Pediatrics shortly after their discharge home; failure to thrive was one of the issues.
- The home was visited by police for domestic violence. Frequent calls for this issue occurred at this address.

The debriefing of this case demonstrated the need for a Circle of Care, as do many of our cases in Special Education. We need to **understand the whole context** in order to respond in the most appropriate way possible.

The function of the Integrated Practicum is to form a type of collegial relationship that enables us to engage in interprofessional practice. Although we have had many focused conversations over time, this year we started to use the focused conversation format for the beginnings of work on joint case planning, whereas formerly we had used it to talk about issues. This format holds some real possibilities because it means letting go of existing ways of doing case plans. In time, we will evolve a new way for communicating with each other and with our joint clients about their care. In the mean time we are using the following questions as a basis for discussion:

- What **Objective** information do we have that is relevant?
- On **Reflection**, are there things that this reminds us of, things that would help to contextualize what we're seeing? What are our hunches, or gut feelings here?
- What does this all mean when we **Interpret** it? How does what we see and what we know and feel from past experience come together to allow us to make sense of all the data? Is there other relevant data that we need, or that might be available? Are there others who could work with us to help us make better sense of what we're seeing and experiencing?
- Taken, together what **Decisions** are appropriate, that is, what should we do to create an integrated response to the issues emerging? How will we follow-up to ensure that ongoing success and support occurs?

In each case, professionals are invited to share and reflect as part of a circle of care, not as individual professions developing individual care plans. Rather, they come together as the Human Services – those services in a community designed to respond to the health, education, social, and justice needs of people. They are responding in an integrated and interrelated caring fashion that nurtures both long and short term health, well-being and competence of individuals and their families.

In this way, we have been able to focus on the long term care and support of individuals and their families, not just provide the rapid response whenever an acute incident presents itself. We've used the social determinants of health, well-being and competence as a base from which to explore the systemic issues that affect developmental outcomes in the health, learning and behaviour. Combining determinants identified by the World Health Organization and York University, we have used education, early life, stress, social safety net, social exclusion, social support, work, employment and working conditions, unemployment and employment security, income and its distribution, food security, addiction, transport, health care services, and housing as a basis for our learning and emerging understanding as well as a focus of our action. In this way we are trying to promote lifelong learning; positive, prosocial behaviours that lead to active civic engagement; and healthy lifestyles that lead to a long and productive life.

The joint problem-solving that occurs when professionals work this closely together is amazing. This circle rapidly becomes a **Circle of Care** for clients as well as professionals. The quality of the thinking that is stimulated when two or three different sets of professional eyes examine the same issue has caused our community to want to expand its capacity in this area. It has also caused our professionals to define themselves in new ways and perhaps to truly understand

their purpose story in the midst of an unfolding now story. However, in this context, they are also getting feedback and reinforcement about the value and function of their professional expertise from all the other professionals in the circle.

From our schools these emerging professionals have learned the meaning of community education principles as they see them lived out. They are able to see how need presents itself along a whole continuum long before it becomes critical enough to warrant acute care. They are able to experience how schools are beginning to function as portals for the delivery of a range of social supports and services. As well, they're able to see how a child's special needs affect functioning in a range of settings. In effect, these professionals are being given the opportunity to **view the community through a range of professional and agency lenses**, and then, through the focused conversations, to synthesize their experiences to talk about prevention, treatment, integration into the community (where it is acknowledged that the community has to change in terms of the support systems provided, or otherwise, the same cycle will repeat itself), and communication of appropriate boundaries.

During the three years this new Circle of Care has been evolving, Crystal Methamphetamine has begun to take its toll on our middle and upper class children and youth. These students have been able to work with us so that we can observe the effects on the street from a range of first responders that includes police, ambulance, fire and rescue, and mobile crisis unit. We have also been able to observe the students from the vantage point of the schools and various health response systems as well as from a housing and nutrition stance. The professionals involved are able to grapple with the specific issues, but also they're guided to see the big picture.

The **Nursing students** choose one of three different emphases in their practicum:

- Early Child Development/Maternal Health/Primary Health Care;
- Developmental Trajectories/Population Health/Chronic Disease – Diabetes; or
- Complex Case Management/Forensics/Children and Families with Addictions and Mental Health Issues

Pharmacy students selected one of the following three emphases:

- Addictions/Developmental;
- Elderly/Palliative; or
- Chronic Disease/Diabetes.

For the **Family Medicine Residents** who just joined us this year, we're developing the kinds of emphases that would be meaningful for them, although the developmental, forensics, chronic disease, and addictions/mental health areas have certainly surfaced here as well.

A planning committee of over thirty agencies/sectors is actively involved in planning and evolving this practicum. We come together to plan as a group at the beginning and end of every term as well as several times in between. Meanwhile, as the coordinator, I continue to develop the relationships between and among various groups.

When Marie Clay developed her Reading Recovery Program in New Zealand she talked about the **two-tiered scaffolding** that occurred. Students were learning

through the support of their teacher tutors and the teacher tutors were learning through a range of learning activities provided by the teacher leader/trainer. There is such a strong parallel between that and our practicum. Students in three colleges are learning from preceptors in a whole range of Human Services; in turn those preceptors are learning and growing as result of their work with students and our work with each other. All of this is occurring in the context of real practice. The focused conversations, field trips and workshops as well as a range of group and individual meetings with me have helped to build a collective vision. In the words of our Police Chief, “We’re on the edge of something really great, so great that we don’t even understand its possibilities yet!”

From our experience with this practicum, we can see that change is gradual. We are on a journey to create a new understanding of the Circle of Care. Because we come from different professional stances, we have to keep the jargon to a minimum and create **common ground** and a **common language** for dialogue. This necessity means that the language we use will be much more understandable to our clients. In turn, each profession has found a valued place in the circle, but at the same time all are able to see their roles and functions in the context of a much broader whole. Because the sectors are quite different, there is often need to explain protocols and ways of using data that cause everyone to be more conscious of their ways of operating, and to reflect on their assumptions more frequently.

For a year and a half, my early years research was conducted from a base at the **Prince Albert Police Service** in the Child Abuse Office in the Criminal Investigation Division. It was there that I wrote the background documents for the Crime Reduction Strategy and developed the Addictions and Substance Abuse Strategy for the region along with a host of community and sector partners. The learning curve in negotiating this move was steep but well worth the effort. I am able to say from first hand experience that different professions have a different way of seeing and interacting in the world. Throughout my undergraduate training I had worked in acute health care, and my mother was a social worker, so the justice area was the one area that was totally new to me. As a result of my work in Understanding the Years, and through the development of the Integrated Human Services Practicum, and the Strategies for Crime Reduction and Addictions and Substance Abuse, I have been invited into each sector and invited to truly work with community-based organizations as well as civic and provincial government departments. The vantage point is different from each, but when you can situate yourself in the centre, which is the **heart of community**, understanding grows and is enriched and honed by all who participate, and the many who put forward their wisdom and lived experiences.

Through the Integrated Practicum we are learning how to provide **care all along the continuum** from prevention to acute care. We’re working at the community and societal level, although most of us respond to needs at the individual and relationship level. We have moved away from ‘fixing’ to collectively trying to create the conditions that enable all our citizens to thrive, notwithstanding that some of them will require more support than others to realize their promise.

A Community and a Region Come Together to Discern and Respond to Issues



At times, citizens ask, “When does a community come of age?” Many would concur that one of the indicators is the collective will and capacity to gather to discern issues and plan thoughtful responses. On March 8 and 9 Prince Albert and area came together for a community summit that was planned by a joint committee representing the economic and social sectors. The two-day summit was attended by over a hundred professionals and community members. It was supported through funding from Service Canada’s Homelessness Initiative to Prince Albert and Area’s Uniting to Heal group, who is responsible for the addictions and substance abuse strategy in the region. This funding was intended to help the group engage in five activities:

- Conduct a **Community Survey** in early January and again at the end of March to see if the work that was being done, particularly the interprofessional dialogues on radio and the community and youth rallies, were making a difference in the community’s awareness and understanding of the relationship between addictions and homelessness;
- Develop a **Website** (www.unitingtoheal.com) to make emerging documents more widely available;
- Host two **Rallies** on March 29: A community rally in the evening hosted by the Mayor of Prince Albert, which was attended by over 700 people, and a youth rally in the afternoon, which was attended by over 800 youth (two successful community rallies hosted by the Mayor and each attended by over 900 community members had already occurred – one on the day of the launch of the group strategy in June 2005 and another in October 2005);
- Develop and air on a local radio station five half-hour **Interprofessional Dialogues** that featured a range of professionals, parents and youth in order to:
 - Raise awareness of the complexity and interrelatedness of homelessness and addictions;
 - Explore these ideas in depth, and from different vantage points,
 - Link information shared at the Summit and the Rallies and also through the web site,
 - Balance facts, logic and emotion by including youth, parents, and a range of professionals,
 - Demonstrate the interprofessional involvement and intersectoral support for finding workable solutions and providing support to individuals and their families;
 - Communicate the big message that “the whole community cares”, and
 - Reinforce that the idea that both individuals and community can do things that make a difference.
- Plan and host the **Community Summit** on March 8 and 9, 2006 (Nosbush 2006b, p. 6).

THE COMMUNITY SUMMIT

They came representing the action groups and the government line departments, all committed to finding a better way to make a difference. The energy and commitment were palpable.

The **goals** of the Summit were to:

- Create a context for a **Think Tank** by bringing together key players who had different skills and strategies for improving the quality of life in our community; and
- Begin to develop a **Community Plan** that would empower the community to achieve short term goals now and work toward long term goals in the future (p. 6).

Prior to the event each group attending submitted three templates that described the issues facing the community and their function or role in addressing these issues. Their responses were collated into a Summit Handbook, which also contained other information for the working groups at the Summit. The issues identified by these groups were presented in a two-page table.

At the Summit itself, there were two keynotes: one describing the economic context by the Executive Director of the Prince Albert Regional Economic Development Association (PAREDA) and the other describing the social context by the Chief, Prince Albert Police Service.

A facilitator from the business sector orchestrated the two days. On the morning of the first day, individuals were asked to surface issues to add to the preconference work completed by action groups within the area. Of the issues raised, eight were identified, as the core issues confronting this area:

1. Education
2. Partnership Involvement
3. Coordination and Communication
4. Homelessness
5. Addictions
6. Youth
7. Housing
8. Sustainable Funding (Nosbush 2006b, p. 13).

The second day was spent developing two-fold work plans for each of these issues:

- One that could be enacted tomorrow for free, and
- One that would require long term planning, input and action to realize (p. 6).

During the afternoon of the second day, a joint presentation was made to provincial, civic, regional and local governance leaders, who received the work plans and engaged in dialogue with the group. There was such a collaborative attitude present that these leaders have since wanted to continue work with this broadly based group. Recommendations articulated the work that needed to be done to address each of the core issues identified by the groups and agencies present. It was decided that the response needed to be a collaborative effort and would work only if each individual group used its skills and talents and paid them forward in

ways that reinforced the roles and tasks of others. During this dialogue, the group acknowledged its diversity but reinforced its common vision for the region. It recognized that individually groups could work more quickly but that they need to work together to address the systemic issues. They **acknowledged and used their interdependence to forge ahead** and take the steps necessary to build a strong, vibrant community where all can thrive.

Yes, the Summit examined the **challenges**, but participants were constantly made aware of the **strengths and richness** that **diversity can harness** when all work toward a common goal. Alone we might feel overwhelmed by the magnitude of the issues; however, when we pondered the issues together, a powerful spirit emerged that literally shouted, 'We can do this if we work together!'

The report of the Summit is posted on our website (www.unitingtoheal.com). It has been eagerly awaited by the community, members of the provincial legislature and government departments such as Housing and government initiatives such as Project Hope. A second summit is being planned to monitor the work to date and more fully articulate what yet needs to be done in addressing the eight core issues that face our community.

THE COMMUNITY SURVEY

The telephone survey indicated significant increases in awareness of homelessness and its relationship to substance abuse. Of the respondents, 39% said their awareness was more influenced by the media and 16% said it was influenced by the rallies. However, the survey indicated a decrease in the percentage of those who perceived that individuals might impact the situation. We concluded that this response was quite predictable. As respondents understood the complexities of the issues and heard them discussed from many different vantage points, they were more aware of the systemic issues that needed to be addressed and underestimated what they could do individually for at least three reasons:

- They felt powerless to change whole systems
- They had not considered the impact they could have if they worked with others; and
- They underestimated the cumulative impact of individuals working closely with their small circle of acquaintances to make a difference in one or two lives (Nosbush, 2006b, p. 26).

The telephone survey will be repeated at the end of December to monitor the longer term impact of the work being done in the community, particularly around the core issues of homelessness and substance abuse. In the meantime, however, gangs are surfacing as another key threat to the community; they were mentioned in relationship to a number of the eight core issues identified, particularly in discussion of the youth issue.

CORE ACTIVITIES AS A LEARNING SOCIETY

The way in which this community is addressing its issues, its service needs, and the provision of services involves the acknowledgement and use of interdependence to work together differently to make a difference. The community has already begun to link its human services and work closely with the economic and business sector as well as with First Nations and Métis groups. These relationships are valued and

will grow stronger as we build a joint future. We have realized that ‘we are better together’! The different approaches and ways of thinking about issues provides a series of vantage points from which we can work together to create common ground. Together these perspectives provide a **collective lens** that will enable us to have a **joint vision** and develop the **joint commitment** required to make it a reality.

The four core activities of learning societies identified by Keating (1999) and described earlier have guided our efforts:

- Invest in Core Infrastructure
- Network Available Resources
- Focus on Core Dynamics of the System
- Monitor Outcomes

CORE INFRASTRUCTURE

On a number of different levels, the community is creating an overarching infrastructure to respond to systemic issues that move beyond single sectors or clusters of sectors. Seeking the involvement of the economic and business sector has been very productive. As these efforts expand, we will evolve a way of working together that has an infrastructure to support it. At present, the need for a full-time, dedicated coordinator is very obvious.

NETWORK OF RESOURCES

A number of gap/overlap analyses of available programs and services in specific areas have already been conducted. One of the recommendations of the summit was to integrate these analyses to form an area data base of supports, programs, and resource people. This data base will enable us to examine the nature of resources presently available. Digitalizing it will facilitate wide access and more timely updates.

CORE SYSTEM DYNAMICS

Keating suggests several key areas of focus:

- The **timing** of investments along the developmental continuum will impact effectiveness. The best opportunities for investment occur during “points of natural developmental transition” since it is during transitions that people are most vulnerable to poor developmental outcomes. To understand the timing variable, a community has to be able to unpack **causes and effects** and be able to **entertain multiple causes of poor outcomes**. This unpacking is hard work conceptually, but very rewarding.

Our natural inclination is to treat effects, or surface level symptoms, rather than look for the community and societal variables that are affecting the outcomes at the individual and relationship level. In order to function optimally, we need to shift the level of our analysis and the level at which we intervene from the individual, where more often than not the response will be reactive, to the community and society levels, where responses can be proactive. With this shift we can actually succeed in preventing poor outcomes rather than trying to ‘fix them up’ once they have occurred. However, this requires not only **new ways of thinking**, but also **new ways of analyzing** what is observed. It also necessitates

comprehensive, integrated responses to be most effective. In other words, we must think and respond differently if we want the outcomes to change. And, this requires a major paradigm shift!

- **Unintended consequences** can sometimes be negative, so it is advisable to anticipate a range of consequences and monitor developments all along. In this way, any unintended negative consequences can be resolved early on, perhaps making it possible, as Keating suggested, to transform events from “a vicious cycle into a virtuous cycle” (p. 345). In this region, there is a strong desire to “build bridges until bridges are no longer necessary” (Mayor Jim Stiglitz, oral presentation, spring, 2005). While this desire will not guarantee that there are no misunderstandings or difficulties, it means that they will be **resolved with integrity, trust and respect**.
- **External change that shifts the equation** can occur. In Prince Albert two significant crises have rocked this community in the past three years: crystal methamphetamine has infiltrated our community, particularly at the middle and upper class levels, and the Weyerhaeuser Pulp and Paper Mill, a major employer and economic player in our community, has announced its closure. These two issues have **shifted our dynamics socially and economically** and both must be carefully considered in all that is done.

Keating suggests that communities need to move away from “an exclusive focus on effective programs or services and toward a more **inclusive approach** in which the overall focus is on developmental health of the population” (p. 345). This community is attempting to step back and examine the bigger picture rather than just reacting. A Premier’s Task Force was established within days of Weyerhaeuser’s announcement and the Uniting to Heal group has been working for the past year and half on the responses to addictions and substance abuse. Both these moves suggest that this community wants to respond thoughtfully and in ways that will affect long term outcomes of the whole population – something that has been called developmental health. This is challenging work because it demands new ways of working together.

- **Investment in research and development** is important. At every step in the process of community development it is necessary to continue developing better knowledge and understanding. Understanding how individuals, families and communities develop enables more informed and strategic decision-making, while **understanding how the whole system works will provide power to change the trajectories for whole communities**. Keating has frequently reminded communities that unless they monitor outcomes, they fly blind! Investment in this area is at the crux of evidence-based decision-making. It is investment here that will halt reaction and lead us to more thoughtful responses. However, the propensity of groups to define their success by “constant doing” can mitigate against this. Investment in this area will lead to more **proactive responses** that seriously consider the systemic variables producing the effects we observe. When a community begins to address these systemic variables, or root causes, it creates a more positive context for human development.

MONITORING AND VISIONING

A number of years ago, in the literacy area, I came across a source that discussed three different kinds of sight, and I have, over the years, observed many people using similar ideas. Learning to learn in an information age is about **vision – being able to see and then using that sight to act**.

The three types of sight represent three stances or ways of viewing reality:

1. **Hindsight** enables us to gain understanding by looking back and observing patterns. However, looking back is not productive if it just results in a ‘woulda, coulda, shoulda’ type of thinking. For it to be useful, we have to analyze where we’ve been and establish our roots (Ellyard). This level of sight enables us to **see the odds** and some of the obvious **patterns** that exist.
2. **Insight** enables us to use the wisdom gained from hindsight to dig deeper and try and discern the **patterns that connect**. It causes us to ask why and nurture innovative practices that can **beat the odds** for particular individuals. Its effects are localized and focused on discovering principles and establishing effects through clinical trials. With these practices we can beat the odds for small numbers of people.
3. **Foresight** enables us to use the wisdom and experience gained from research and practice to affect systemic change and therefore **change the odds** for large numbers of people by anticipating the future. It involves large scale policy, program and resource deployment change.

All three types of sight are necessary, but it is foresight that changes systems so that all children, youth and their families can realize their promise. Without **reflective capacity**, even hindsight is not available. Although the discovery of innovative practices is absolutely necessary, it will only affect small numbers unless this knowledge is used to move to **evidence-based decision-making at a system level**. Without group meaning-making it is not possible to make this shift because individuals alone do not change systems; systemic change is a highly social act that emerges when interdependence is acknowledged. When we work together interprofessionally and intersectorally, we are able to affect multiple system change, which is what is required for successful adaptation in this rapidly changing world. It is about **learning to see in new ways**. As Ralph Waldo Emerson has noted:

*Do not follow where the path may lead,
Go where there is no path and leave a trail.*

Perhaps one of the core attributes of learning to learn in an Information Age is learning to **become path makers** and not just path takers (Ellyard). In this transition our destinations have to change and so do our methods of travel. If they do not, we are bound to repeat the past and perpetuate the odds rather than change them.

Conclusions



In their work with troubled youth Brendtro, Brokenleg and Van Bockern (1990) developed a practice model called **The Circle of Courage**. It is based on the notion of **reclaiming**, which they defined as “to recover and redeem, to restore value to something that has been devalued” (p. 2). They used the term courage to describe their model because courage is a key virtue in both Western and Native American thought. The Circle of Courage is about individuals but it also highlights what the environment needs to provide in order for youth to thrive.

Brendtro, Brokenleg and Van Bockern use the definitive work on **self-concept** by Stanley Coopersmith, who observed four basic components of self-concept:

1. **Significance** is found in the acceptance, attention and affection of others. To lack significance is to be rejected, to be ignored and not to belong.
2. **Competence** develops as one masters the environment. Success brings innate satisfaction and a sense of efficacy while chronic failure stifles motivation.
3. **Power** is shown in the ability to control one’s behaviour and gain the respect of others. Those lacking power feel helpless and without influence.
4. **Virtue** is worthiness judged by the values of one’s culture and of significant others. Without feelings of worthiness, life is not spiritually fulfilling (as discussed by Brendtro et al., p. 35).

The number four has sacred meaning to Native people who “see the person as standing in a circle surrounded by the four directions” (p. 35). Brendtro et al. present the model visually as a wheel with four spokes or supports that keep the wheel “true” and strong. They propose starting in the east where the sun rises with belonging and proceeding clockwise around the circle to mastery, independence and generosity as “the central values – the unifying themes – of positive cultures” for education and youth work programs. Through my work with this model in many and varied settings over the past decade, I would suggest, based on its use in many countries around the world, that their model has much broader impact. As a result, I will use it to summarize below what we have learned about learning in an Information Age. After briefly describing the model’s original significance for development, I will then articulate the links I see connecting it to learning in an Information Age.

1. BELONGING

On the wheel belonging is situated in the East where the sun rises. As such it provides the hope, the possibility of a new day. It is the beginning, the cornerstone on which all else rests. Those who have explored **attachment**, which is the psychological name for this value, have suggested that a secure, positive and enduring attachment with a major caregiver enables the young child to develop a base of **trust**. It is from this base that children move out to **explore and learn** from the world and move inward to develop an **integrated sense of who they are**. The soul’s deepest longing is to feel a sense of connectedness and value for who you are. “Humans have a need to feel valued, important and protected by others...to feel comfortable and welcomed within a group” (2002, <http://www.behavioradvisor.com/CircleOfCourage.html>).

Bronfenbrenner reminds us the **four worlds of childhood** (the home, school, peer group and community) are where the child experiences reality and where they 'live love and learn.' If children do not learn how to relate in their primary relationship with their parents, they may search for belonging in other ways that further disrupt their development, such as gangs and cults, or they may never attach to others, becoming aloof and isolated. Naisbitt warns that in an Information Age, the high tech world must be balanced with **humans' need for high touch**, that is, social relationships. Our earlier discussion in this paper about the nature of small worlds, which described tightly clustered hubs with strong links within them, attempted to articulate this need from a broader perspective.

As we were exploring the question of how to learn in this age, we discovered that **learning is nurtured through relationship**. It is relationships that will nudge us beyond the hindsight stage of visioning to plumb the depths of insight, and then to develop the foresight and the courage to implement what has been learned. Whether we couch this learning in terms of Knowledge Exchange, Focused Conversation, Six Thinking Hats, or the three types of sight, we are talking about the kind of **dialogue that transforms**. It is respectful and it honours contributions by receiving them as gifts, but it is also capable or challenging and questioning because it involves relationships built on trust. Furthermore, it **nurtures risk-taking and exploration** because the fear of making a 'mis-take' is not so high that all have to 'play it safe.' This type of relationship encourages individual and collective 're-cognizing' and honing of meaning over time. It provides the base on which we can use our learning to try new things and new approaches, in other words, became path makers.

If someone were to ask what community development is about at a systemic level, we would respond, "Relationship, relationship, relationship!" Our relationships nurture, support, challenge, are filled with trust and call us to be the best that we can be. They are a place where we live out the fact that there are many gifts given for one community. Rather than conformity, the different groups in a community promote and encourage diversity or green hat thinking; they also provide space for the kinds of thinking that all the other hats enable. Consequently, we need to care for the relationships we have; in other words, we need to truly **care about the people** as well as what they bring to the group. These groups are supportive of individual and group needs.

The three characteristics that define a positive attachment relationship also define the relationship among community groups: positive, enduring and reciprocal. Rather than being a quick fix in the short term, these relationships need to be **nurtured and built over time**. We need to **tend relationships** like we would beautiful plants in a garden. Just as gardens do not grow themselves, relationships do not either.

When people feel that they are **valued members of a group**, their level of sharing increases as does the depth of their responses because they can 'dare to be vulnerable' with one another. They don't feel the need to compete because they are thinking about 'we', not just 'me.' Misunderstanding and miscommunication can and will occur, but the power of the relationships helps to mend fences quickly and effectively. People who feel supported in this way **reach out and connect** with others to form a range of strong and weak links. As Ellyard suggests, they become mission-focused rather than just problem-focused. Herein lies a not-so-subtle distinction. In the latter instance, the focus is on the negative and in the former it is on the vision and the positive outcomes that the group is working toward. It is not that problem-solving doesn't occur in both instances; it's a

matter of how it's contextualized. For the problem-focused, problem-solving is everything. For the mission-focused, it is a part of a much larger whole; the focus is on the now stories in the context of the purpose stories.

Groups have **rituals** for coming together and doing business. For example, in *Uniting to Heal*, we always begin with introductions and some updates of what's happening in our personal lives and in our agencies. We always end by going around the circle asking people for their words of wisdom as we ponder what has occurred during the meeting. All the voices are heard at the end, reminding us of our richness and the wisdom that exists within. These opening and closing rituals cherish individuals but they also help us define who we are as a group – separate, unique, diverse and yet united in our purpose story. Because the **purpose story** guides the activities of the **now story**, it is through our activities that we further cement our relationships and clarify our vision for the future.

One of the dangers of living on the edge of possibility is lack of vision. Without vision, chaos results because there is a disconnect between the purpose and the now stories. That is why **story catchers** are so critical in this Information Age. If the power and value of story to unite and clarify vision is not acknowledged, we will 'drown in information and be starved for knowledge'. As indicated earlier, knowledge is what emerges when data is contextualized and integrated with the wisdom and lived experience of individuals and groups. In this fast-paced 'instant' society we live in, there is a tendency to want everything immediately and vastly short circuit the process. Just as an egg does not become a butterfly overnight, neither does data become insightful action instantly. We've learned that it is not a one-time learning process that is needed, but rather an ongoing commitment to a process of transformation that we call a learning society. The process is not linear; it is recursive and operates at many different levels.

Learning in an Information Age is about **meaning-making** individually and collectively, which is ultimately a very **social act** that **involves the whole community** not just a select few. It honours the dignity of individuals and groups. As they pay forward their wisdom and lived experience, they are more deeply connected to each other and to their community, forming a rich tapestry that is strong, warm, and supportive in times of needs and open and nurturing at all times. Belonging gives us that sense of **dignity** about who we are and it provides a **strong base** for all that follows.

2. MASTERY

Mastery suggests a sense of **achievement**. When people have mastery they "feel competent in their abilities, seek more skills and knowledge, and are willing to fail or look unskilled when they try new things" (2002, <http://www.behavioradvisor.com/CircleOfCourage.html>). As people gain competence they can more ably negotiate the physical, social, emotional, cognitive and spiritual worlds in which they participate. Life is a journey toward mastery that unfolds in developmentally appropriate ways. There is need to **create the contexts that mobilize the mastery** of individuals and groups. Although the two are independent, (individual growth can occur without group growth and vice versa) they can work in tandem so that the skills of individuals help the group and, conversely, the skills of the group can help the individual to grow. Mastery brings with it understanding and skill development, giving individuals a sense of **accomplishment** and a feeling that they can successfully handle life.

Just as individuals move through developmental stages so do groups. Our groups have learned the skills of interacting, really listening, building consensus, fostering a sense of hope and resolving conflicts when they arise. They have also learned how to challenge an idea without the person involved feeling challenged. To exercise these skills we need **tools**, or ways of going about business, and our purpose story needs to be told. Groups come together for this purpose but they actually need to engage in some tasks to feel that sense of accomplishment. If they think reflectively about their actions, they can develop the three types of sight and truly enrich everyone by that learning.

Samuel Taylor Coleridge, an gifted poet and leader of the English romantic movement, suggested that readers could be divided into four classes:

- **Sponges**, who absorb all they read and return it nearly in the same state, only a little dirtied;
- **Sand-glasses**, who retain nothing and are content to get through a book for the sake of getting through the time;
- **Strain-bags**, who retain merely the dregs of what they read; and
- **Mogul diamonds**, equally rare and valuable, who profit by what they read, and enable others to profit by it also (as contained in Runes, 1995, p. 254).

Just as readers can be classified in this way, so can a range of roles that people play from student to professional to community member. Notwithstanding that the other three types exist, it is the mogul diamonds that will enable transformative growth. So the question becomes, “How do we nurture the growth of mogul diamonds?” We have some ideas that have emerged from our experience:

- **Name** the talents and skills people possess and are developing.
- **View** these talents and skills as **gifts** and treat them as such.
- **Celebrate** the successes of individuals and groups.
- **Share** resources, strategies and ideas and develop ways of organizing and sharing this information so that it is widely available, understandable to a range of audiences and usable for diverse purposes.
- Learn how to **really listen** to people.
- **Link** people, ideas, and resources in human and digital hubs and learn how to nurture and expand both strong and weak links.
- **Mentor** one another in developing new skills in ways that enrich the mentor and the mentee.
- **Support** one another as change is negotiated.
- **Reflect** on successes, challenges, and failures and recognize that a great deal can be learned from ‘mis-takes.’ Engage in both individual and group reflection throughout.
- **Collaborate** with others by working together on a range of projects.
- **Learn** in one another’s **shelter**.
- Develop and nurture **interprofessional relationships** so that you can learn to see with a range of new lenses. Explore ways that you can operate as team to meet the needs of clients more effectively and efficiently.
- Learn how to **provide a seamless weave of supports and services** in which the talents and skills of all are woven together to create a rich tapestry of support for clients, professionals and the community.
- Learn how to put **clients at the centre** by giving them voice and participation in the groups that work to support them.
- Develop **strategies for sharing and thinking** that enable a full range of thought and reaction, as well as depth of thinking.
- Adopt **different lenses and stances** to view the phenomena and honour each lens rather than selecting one or the other.

- **Develop a collective lens** that will enable the group to receive and give knowledge as well as develop comprehensive understanding of phenomena.
- Although there are four levels of variables (individual, relationship, community, and society) in any social system, attempt to **explore the systemic causes that create the effects** observed at each of these levels. This exploration will challenge individuals and groups to develop whole new ways of thinking about data and information. As individuals, agencies, and sectors engage in this new way of thinking, they must remain open to new ideas rather than just substitute one way of doing things for another. There will still be need to embrace a paradigm; however, it should be an inclusive paradigm and enable individuals and groups to realize that it is but one way of viewing the world. In other words, the **paradigm is a tool to view and direct action** in the world; it's not the world itself. In using this tool, we must be open to other tools (paradigms) as well.
- Acknowledge that **prevention** often involves exploring the community and relationships. This exploration will require a large-scale, multi-pronged effort, but it is only one part of a whole community plan. Also required within the plan are treatment, integration back into the changed community after treatment, and enforcement of guidelines and laws that determine the consequences of inappropriate actions.
- Develop **evaluation techniques** that enable monitoring and reflection on the process as well as the outcomes. Realize that evaluation is not only something done after a project is completed (cumulative evaluation); rather, it is an ongoing companion in the whole process (formative evaluation).
- **Build communities of learning** that enable continuous growth and improvement. This effort will require investment in relationships – nurturing and supporting them as they grow and develop;
- **Reach out** to other groups and share with them as well as learn from them. This type of knowledge exchange is vital. When everyone is learning and exchanging information in the networks or hub models described earlier, the whole community benefits.
- **Continue to learn** and develop which means being willing to let go of ways of operating and ideas that are no longer functional, which, in essence, means knowing when to let go and when to hold on;
- **Invest** in ways of attaining **good quality data** and **information** and the means to help these develop into **knowledge** leading to **thoughtful evidence-based action**. In other words, invest in the data transformation process. A range of data needs to feed the system. Many interprofessional lenses exist for interpreting data and considering what it means in terms of policy, programs and services. If this process works well but it is founded on poor data, the evidence base will not support the resulting action. **Vigilance** must be present throughout the transformation process. This process requires us to examine new ways of gathering more comprehensive, and more informative data. Vigilance will also lead us to develop new ways of sharing information, providing a more comprehensive picture of the developmental health, well-being and competence of our neighbourhoods and communities.
- **Persist** in these efforts because very few of the returns are short term. Many initiatives take time to evolve. However, there is a need to monitor what is happening all along the continuum of evolution and do it in a variety of ways to ensure that investment is solid, thoughtful and strategic.

The development of the skills and strategies for learning in an Information Age will change over time and become richer as interprofessional collaboration increases. Our Community Summit helped us to realize this. We are required to live and operate on the edge of possibility, but because there are such opportunities, it is worth the uncertainty. We must, however, persist as a group and continue to nurture our collaborative efforts, understanding that it is together we will go far.

3. INDEPENDENCE

People with a strong sense of independence “feel in control of themselves, their behavior, and their lives. They have a well-developed sense of autonomy, and accept responsibility for themselves and their actions” (2002, <http://www.behavioradvisor.com/CircleOfCourage.html>). Early life involves a drive to become independent that reaches its zenith in adolescence. To the degree that individuals have a strong sense of belonging or attachment, they can develop a balanced sense of autonomy or independence. When they do not have a strong sense of belonging, they are more vulnerable to co-dependent relationships and being easily swayed by others. Once youth have tasted the first blush of independence, they begin a lifelong journey of discovery of the interdependent nature of all things. They begin to realize that they do not operate in a vacuum and that their actions affect the actions and lives of others and, others’ actions affect them.

Learning in an Information Age means that we recognize that our capacity to learn is **nurtured in communities and that today’s learning rests on yesterday’s discoveries**. Independence develops a sense of power, a notion that you can make a difference. For our learning communities, the discovery has been, “Together we are better!” Together we can accomplish things that would not be possible for any of us to accomplish alone. In order to function in interdependent relationships, individuals need a healthy sense of independence. By the way we nurture groups, we can ensure that membership does not require compliance but rather encourages diversity, enabling us to mine the richness within the group rather than the ideas of just a few. We have come to realize that it is never ‘power over’ others that wins the day but a **shared sense of power** that provides a place in the sun for everyone. In true interdependence everyone wins, there are no losers. How to create contexts where everyone can grow and **discover their human being in the shelter of one another** is one of the greatest discoveries a community can make.

Our work in **interprofessional and intersectoral collaboration** has caused us to realize the power of this work to transform communities and create a new social safety net. The structure that it creates is a circle rather than the typical hierarchy and, as such, it **nurtures the relationships that knit us together**. There is great strength in ‘**learning to see as others see**’ but it means that we must be **open to examining situations from different stances**. When we can let go of what separates us and cherish what unites us, we can see that different professionals, community-based organizations, government sectors, and the voluntary sector have different skills, talents and gifts to ‘pay forward’ to make the community stronger and more supportive. There is no competition; rather, a deep sense of **respect** for one another emerges.

The sharing in an interdependent context is remarkable. It has helped us to recognize the pattern that connects us; we’ve become aware of many tightly linked hubs and we’re creating the weak links that enable us to benefit from the richness in each hub. Working in an interdependent fashion does not require

leaving or replacing the tightly knit hub of a profession or work place; rather, it helps to connect these hubs and enables knowledge to flow back and forth. In this way, the evidence-base and the connectedness increase in a proportional manner. The **tapestry of support** broadens because each link, whether strong or weak, has individual, small group and large group strands. This type of support nurtures insight and facilitates foresight because the **stance can be shifted** as a result of the communication.

In the model put forward by Brendtro et al., interdependence is not discussed *per se*, but there is ample discussion of the development of **internal control** and the **social support** that is required for this to develop. They believe that if youth develop a healthy sense of their own power and freedom, and this sense is nurtured by **positive role models**, youth will develop a meaningful role in society. Their growth must be accomplished by explanations of the effects of actions (Brendtro et al., pp. 41-42).

This trajectory of development for youth contains lessons for a community as well. Each group requires social support to do its work and it must be true to its purpose story but these purpose stories are interconnected at a very deep level. For example, the cognitive disabilities group must work toward understanding and support of individuals with cognitive disabilities, but in so doing, it will need to link with other groups, such as the Fetal Alcohol Spectrum Disorder and Addictions Group as well as Kids First and Family Futures. All these groups are dealing with the causes and effects of some very similar issues.

Sometimes whole sectors need to learn from one another as we did at the Community Summit. When the economic and social sectors learned from one another, they saw that they brought different tools and different resources to the table and they even thought about the same issues in very different ways. When **common ground** was established, the skills, resources, and tools could be used in an even broader context. We saw how everyone taught and everyone learned at the Summit, demonstrating the **reciprocal nature of mastery and generosity**: one learns and then one gives; **it is in the giving** one learns about others and about one's own inherent goodness.

Each of the groups in the community has a unique role but they also have a shared role. It is the capacity to see the individual group role as a rich part of the shared role that creates the framework for operation that we have been discussing. United under a broader more all-encompassing set of goals, groups see how they fit and enable the work of the broader group. Conversely, the broader group understands how best to nurture and facilitate the work of individual groups. It is this kind of learning that enables everyone to see the **pattern of connection** and creates a **synergy** driving the work forward in thoughtful, all-inclusive ways.

4. GENEROSITY

Generosity involves individuals being “empathetic toward others and want[ing] to help others. They give of themselves or their possessions in some way. They truly have the ‘joy of giving,’ receiving pleasure from helping others in need” (2002, <http://www.behavioradvisor.com/CircleOfCourage.html>). This can develop the **capacity to care** because early in life they were cared for because the groups to which they belonged “shared time, work, play, resources, and knowledge” (ibid). **Being generous with one's gifts and talents and feeling needed and valued** in a community develops a sense of your own basic ‘goodness.’ As this is discovered,

there is an even greater drive toward mastery. In the giving and use of the skills and talents, individuals develop even further and thereby gain an even deeper sense of being part of the community. They receive the reward that comes from sharing of self and personal talents and skills. Groups, in turn, also share themselves and their talents and skills. This is how **social capital** grows.

Together belonging, mastery, independence and generosity create courage; without them there is discouragement (Brendtro et al., p. 46). Brendtro et al. noted, “To be reclaimed is to be restored to value, to experience attachment, achievement, autonomy and altruism – the **four well-springs of courage** (p. 56). They articulated four essential elements of the reclaiming environment that are briefly described below and then related to our discussion.

1. Relating to the Reluctant

“Relating to the reluctant examines the strategies for establishing positive relationships with youth whose lives have been marked by alienation” (p. 57). Learning to learn in an Information Age requires drawing the circle broad enough that all are included and all voices are heard. Only then can we learn from the wisdom that all have to offer. Our structures and our groups must be inclusive, and we must nurture and mentor relationships within the group so that all feel a valued part of reclaiming our community. There is no room for an ‘us’ and ‘them’ in this kind of work; it is about creating a web of connections that unites us all. Each individual deserves to be part of a tightly knit hub and connected through weak links to other hubs. When individuals do not feel connected, they experience alienation and their reaction can be either internalization or externalization of that alienation. Community schools have worked to create a hub through their work in communities and they have fostered the creation of a range of other hubs within communities. We need to continue and expand this work.

2. Brain Friendly Learning

“Brain friendly learning presents alternative methods for organizing learning experiences to reverse patterns of failure and futility” (p. 57). There are many ways to learn. We, as educators, have sometimes been hampered by our narrow focus on academic learning models.

Although there are many similarities in the ways that our brains are wired, there are also many individual differences. Some of us process some types of information better than others; some of us like to proceed from general to specific and others from specific to general. However, generally speaking, our learning is more powerful if it is grounded in the real world and we have the tools to think critically and creatively about our experiences. All of us want to be **actively involved** in our learning rather than passive participants. We like to learn **from people who are more experienced than we are**, and we value **constructive feedback** that honours what we’re doing right, gently molding what needs to change in us. We need ways to handle large amounts of information and tools for making sense of it in order to see the **patterns that connect**. We need to ask questions, sometimes the same questions over and over again, and we need ‘teachers’ who will respond to our needs. If we’ve experienced difficulties in learning in the past, we need gentle encouragement to try other approaches. We need to **experience success** to view ourselves as **life long learners**.

How do we do this in community? We learn in the **shelter of each other**, recognizing that everyone is a teacher and everyone is a learner. We both give and receive. When this **reciprocity**, is prized and held up as the model, everyone benefits and we acknowledge the very **social nature of learning**.

One of the most poignant community examples of this reciprocity occurred at one of our Hunger Conferences in the context of a table discussion. People were talking about availability of various types of foods and the 'know-how' to prepare them. One of the mothers said that she didn't know how to 'cook lettuce' and the lady beside her said, "I've tasted the wonderful bannock you make, if you show me how to make bannock, I'll show you how to 'cook lettuce.'" In this situation, the different skills of each person were recognized and utilized. The women involved didn't require someone to set it up for them; they just swapped 'know how' and were enriched by it. The model was based on the positive – what each person could do – rather than on what each person lacked. Both came away feeling encouraged rather than discouraged. This incident demonstrated that there are times in the learning experience when **we need to shelter others** and times when **we need to be sheltered by others**. It is this celebration of the capacity to help one another that helps to create the strong bonds in tightly knit hubs.

Learning in an Information Age needs to occur in many contexts and in many domains. We require ways to share this learning and celebrate it. In many ways, the *Community Summit and Community Survey Prince Albert and Area Report* (Nosbush, 2006b) describe this learning and can be used as a reflective base for the next stage of learning. We need to create records of learning and the learning process, so that we can critique our processes and improve them with time, making them more responsive to different types of learners and more inclusive of the whole community. Above all, we need to move away from the technical jargon that so characterizes individual professions and sectors and create a common language. This **common language** will nurture the development of the common ground that will be our new base of operation. We need to invest in each of these processes and be open to the need to be responsive to each others' needs.

3. Discipline for Responsibility

Discipline for responsibility is described by Gisela Konopka thus:

Obedience is demanded to achieve a person with discipline. But this is a discipline that comes from the outside and works only when one is afraid of someone who is stronger than oneself. We do need discipline, an inner discipline to order our life. What is inner discipline? To my thinking it is the opposite of blind obedience. It is the development of a sense of values (As cited by Brendtro et al., p. 79).

Groups in a community must be disciplined and operate from the purpose stories that articulate their values. They must work with other groups in a way that enables the whole to be greater than the sum of its parts. They must work together in ways that are **mutually supportive**, not allowing competition for funds or power to cripple their combined power to effect lasting change in a community. How we function and how we treat each other models what our community is, so we must ensure that we **model what we hope to achieve**. Everyone will learn **what it means to be community** by how we work

together. This effort will require sensitivity and trust as well as the capacity to step back at times, **examine the common good** and make our choices accordingly. Learning in an Information Age encourages the transformation of data but it also creates the kinds of **relationships** where that transformation is nurtured. It does so because **inner discipline** is practiced by individuals, groups and the whole community. As we work together, we need to take individual and collective responsibility for our actions. In so doing, we help to nurture greater capacity to respond in others; in other words, our 'response ability' grows.

4. The Courage to Care

One learns primarily about care by the way in which one is cared for; in other words, it's hard to give what you haven't received. As our Uniting to Heal group was formed we acknowledged that it was not just those abusing substances who needed to heal, it was the whole community. This meant that we had to critically examine the contexts for human development we were creating in the community and to explore ways that we could **build assets** in the community and nurture them in individuals. In other words, we needed a **blueprint for human development** and then we needed to examine our community with this in mind. This was presented in terms of a 'doorways model' and the question was posed, "Are these doorways opening for all children, all of the time, all along the developmental continuum?" We talked about a **strong start** (see Nosbush 2004 for a more in depth explanation of a strong start and the doorways model) for all children and articulated the requirements which were depicted as doorways:

- **Homeplace or Heartland** provides the social and psychology space that grounds children
- **Bridgeline** of housing, income and workplace creates the first line of protection
- **Safe Start** protects from harm
- **Healthy Start** ensure conditions for health and its monitoring. Together the safe and healthy start create the second line of protection
- **Smart Start** provides opportunities and hope;
- **Sensitive Start** provides relationship; and
- **Connected Start** provides community.

This blueprint helped us to assess our capacity to care as a community in very concrete ways. In an ongoing way, it will enable us to **evolve a report card** that conveys our progress in each area and provides a **road map** for work yet to be done.

Learning how to learn in an information age requires **courage** because inevitably there will be slips and falls along the way but the rewards are great. Learning in an information age must honour the continuity of learning throughout the ages and, not surprisingly, it is about contextualizing the now story in the purpose story:

Across centuries and cultures, the saga of our forbearers has been carried to us in this time and place. Now the responsibility is ours to keep their story alive. A society marked by alienation must rediscover its heritage of enduring values. Then, as Ellen Key said at the beginning of another century, these truths will be renewed in the conviction of a new generation of human beings (Brendtro, et al., p. 96).

Given below as an illustration of the effort to discern the patterns that connect are some of the connections that my graduate students have made in their reflections.

Many of their comments were technical and related to the specific content, but these are some of their more general comments.

- **Karin** noted that de Bono's thinking hats reminded her of the colours of the Medicine Wheel. She described how she could more fully understand this strategy using the Medicine Wheel and seeing how it connects with other learning cycles. For her, the thinking hats were a means to view the child in a more holistic way. She also said that she could use it to look at students in different situations, using different 'hats' as observation tools to inform her assessment and evaluation.
- **Connor** noted that he valued de Bono's model for several reasons. First, it emphasized that a good balance of thinking hats is best. While it is necessary to recognize our 'home state,' we should personally strive to achieve a balance. Second, the framework is easily explained to students and colleagues. Third, it forces you to start at the bottom of the ladder of abstraction by categorizing and analyzing your own thinking. This focus not only helps a person become self aware but also helps students and teachers become aware of the strengths of others. In a way, Connor notes, de Bono's thinking hats provide a framework to teach the whole class about learning differences.
- **Sandra** noted that as an educational community, we need to place more emphasis on teaching thinking skills. She planned to use the ORID process herself and with students to promote deeper thinking in order to make better sense of things. She felt the process helped her to see things in a broader, more global way. She intended to model and share it so that her students could experience the same things she did. She also planned to use the thinking hats with her staff to add more perspectives when they were making major decisions. In addition, she wanted to use it with her English and Communications classes prior to study of the debate process.
- **Kelly** indicated that she had gained a more holistic view of the child. She felt more confident in her ability because she now had a good understanding of many concepts as a result of her reading, reflective logs, and the teaching and sharing in class. She noted that the children she teaches will see a new and improved program more suited to their individual needs. She planned to develop a collaborative working relationship with a classroom teacher so she could work with a range of students using these ideas.
- **Monica** frequently analyzed her own learning, relating what she was learning to the students with whom she worked. When she described students experiencing attentional problems, she noted that it was critical for teachers to identify the exact areas of difficulty rather than globalizing problems. When teachers and students work together to develop better ways of handling the difficulties, they are more effective and they understand the true nature of the challenges. Since reflection had increased her understanding, she planned to help students learn to monitor their own behaviours and then reflect on them. She noted that teachers could maximize students' attentional levels by making the information interesting and ensuring that it is at their level.

- **Gabriel** became increasingly aware of the many ways in which people can make meaning. He noted that learning is truly the making of meaning. Moreover, since the learning process is not one-sided, he would need to join his students in learning. He suggested that the quest for learning must be more inclusive. In so doing, he noted that his teaching style would be transformed, which could lead him to personal transformation as well. He was particularly influenced by Doug Willms' suggestion that boys often externalize their distress, while girls generally internalize it. He planned to use different lenses to look for the signs of distress and develop more appropriate responses to the behaviour of boys and girls.
- **Frank** shared extensively with the class what it was like to have Attention Hyperactivity Disorder. He grew to understand that with his challenges came a series of strengths. As a result, he began to view himself and his capacities in a new light. His ability to share and reflect on his own experiences often enabled others to acquire insights and provided them with a base for a new understanding of attentional issues. Frank's strong commitment to special needs learners inspired the class to seek first to understand, then respond to the whole student, using the student's strengths to build in areas of challenge.
- **Rita** noted that it was important to see special needs students' strengths as well as their needs. Any data collection must involve a balance of information about strengths and needs. Once data are collected, there needs to be a frame for interpreting it. Rita felt that she was developing a framework that could assist her colleagues in collaborating to tailor programs to meet a student's needs in a vast range of areas, from social skills to writing and literacy issues. The goal of such work, she thought, is to create a better school experience for all students.
- **Molly** wrote of reflection in her log:

Because of this extremely personal approach to understanding and utilizing information I see how important it is to make a variety of options open to students in their learning. Giving them choices in how they can discover information and how they can present it in ways that are meaningful to them is important. I also see how a classroom filled with a variety of learning styles, nurtured and encouraged, would be a much more dynamic environment to be in. It would be very exciting to experience information as the students see it – having them teach me, and each other, how to be more accepting, adaptive, understanding and unique. A classroom modified to incorporate a larger scope of attention and memory levels would create a more positive and interactive environment and teach the students how being different is certainly not a negative thing.

Just as Molly desires to be invited into her students' learning, I feel privileged to be part of my students' learning community. Their insights and capacity to create connections have taught me much and have enabled me to be a better teacher – one who has learned to work at the cutting edge of students' competence.

Throughout this paper we examined learning in classrooms, in schools and universities, in communities, and in interprofessional and intersectoral contexts, in order to discern underlying principles. Torjman et al.'s literature review on how communities learn surfaced three major themes:

- There is a significant difference between information and knowledge; information can't really be considered **knowledge** unless someone uses it.
- The learning process must **take into account the needs, concerns and interests of potential users** in order to be applied effectively. The learners are as important in the learning equation as the material being disseminated.
- Learning is a **two-way interactive process** that must actively and meaningfully engage learners, preferably through "a mediating process that ideally involves interpersonal interaction" (2001, p. 1 - 2).

Perhaps it is appropriate that we end this account of our journey to understand how we learn in an Information Age with a brief discussion of the role of **social capital**. Putnam (2000) suggests that social capital refers to "the features of social organization such as networks, norms and social trust that enable coordination and cooperation for mutual benefit" (as cited by Torjman et al., 2001, p. 14). The leading Canadian researcher in the area describes it more basically as "the relationships, networks, and norms that facilitate collective action" (Helliwell, 2001, p. 6).

According to Putnam (2000) there are two types of social capital: **localized social capital** exists within families, neighbourhoods and associations whereas **generalized social capital** brings together diverse people and runs across traditional social and physical boundaries (as described by Torjman et al., p. 14). We have found these two types of social capital to be mutually supportive and would suggest that without localized social capital, it would be very difficult to nurture generalized social capital.

We can understand social capital by examining it in relationship to two other kinds of capital that Coleman identified:

Physical capital, "as embodied in tools, machines, and other productive equipment" and human capital which is created "by changes in persons that bring about skills and capabilities that make them able to act in new ways.... **Human capital** is less tangible, being embodied in the skills and knowledge acquired by an individual, **social capital** is less tangible yet, for it exists in the relations among persons (Coleman, 1988, p. 100).

In an Information Age we have to be able to do all three of the following at the same time:

- Utilize the **advanced technologies** encompassed in physical capital.
- Develop **human capital** in terms of the knowledge and skills of a whole community. This challenge necessitates involving people in all sectors across their lifespan so that they can participate fully in knowledge exchange and knowledge development.
- Nurture the kinds of **relationships (social capital)** that enable group learning as well as individual learning. Social capital has a powerful role in "diffusing human capital" (Torjman et al., p. 15) through what Coleman (1988) calls "information channels" (p. 104). Torjman suggests that information is available to other members of that community in proportion to the amount of social capital they share. This connection has a twofold effect: it reduces cost of obtaining information from outsiders, and because of the level of trust, individuals in the community will be "more likely to accept and assimilate information that comes from members of their own community" Torjman et al., p. 15). This is the nature of tightly knit hubs who share strong links within their group and weak links to other members of the community. It is the nature of the weak links in the broader community to form the conduit for knowledge exchange.

The links or frameworks connecting the whole community, which was one of the goals of both the Human Services Integrated Practicum and the Community Summit, facilitated learning by increasing trust, reducing fear, strengthening relationships, and facilitating the transformation of information into knowledge. In turn, the links that were forged set the stage for strategic action and other thoughtful responses. These same strong links were created during the graduate classes, although once the classes were over, they evolved into weak links that connect the hubs to which each of the students belong.

Learning how to learn in an Information Age involves developing skills with a range of **new technologies** and a **spectrum of individual knowledge, skills and strategies** that find their **ultimate expression in social capital or the relationships**. It is critical for us to situate our responses in the present based on our knowledge of students' backgrounds but even more critical to examine these areas in time and their significance for the future.

A human life is a work of art than can reach eternity. Each life has the ability to touch other lives, which in turn touch yet more lives. And so, person by person, generation by generation, a world and a future are shaped (Kinkade, 1999, p. 232 - 233).

It would be so easy to suggest that learning is all a matter of learned strategies, but it goes much deeper than that. Our children learn from us how to be human. That humanity undoubtedly encompasses the use of tools and various technologies, but ultimately we will not succeed until we recognize that

[t]here is an unexpected magnificence in our children and an underestimated power in their ability to change our world for the better. It is through our children that we can go beyond the frontiers of science and technology to explore the recesses of the human heart (Gordon, 2005, p. 9).

Although we have “managed to harness the power of the wind, the sun and the water”, we have “yet to appreciate the power of our children to effect social change” (Gordon, 2005, p. 9). They will learn from us, but “in our children we have an opportunity to create a new order where our differences can be acknowledged and respected but our similarities will be our uniting force” (p. 10).

In an Information Age, it is so tempting to focus efforts outward on the vast new vistas that technology offers; the paradox is that the **real pedagogy of hope** will not be found out there, but rather, **inward** in a journey that begins with the loving relationship in the human dynamic of a parent and child that will enable us as a society to “inspire in them a vision of citizenship that can change the world” (p. 6). Then as our children move outward, they can realize what a world would be like where we live, love, learn and develop our human being in the shelter of each other. And, it is that **sheltering capacity** that builds the trust and ability to explore the **edges of possibility**.

Learning how to learn in an information age is a process not a destination. The points we visit along the way are but opportunities for valuing of work, telling our stories, clarifying our vision, and shoring up our resources (physical, human and social) for the next leg of the journey. Let's celebrate the journey, our collective achievements and partnerships and be enriched along the way as we shelter and are sheltered by our companions along the way.

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