

PERSONAL CONSTRUCT CHANGE AND COLLABORATIVE REFLECTIVE
PRACTICE: AN EXAMINATION OF THE USE OF REPERTORY GRID
TECHNIQUE FOR ACTION RESEARCH IN A MIDDLE YEARS SCHOOL IN
MANITOBA

by

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Abstract

This thesis describes a research study that examined how collaborative reflective practice with three staff members in a middle years school affected their psychological constructs of what constitutes a good school. Using an action research design, the study made use of personal construct psychology and the methodology of repertory grid technique. Repertory grid results were analyzed using methods developed from personal construct theory (cluster analysis, principal components analysis and messy change grid analysis). The analysis was shared with participants using an iterative, action research model. This permitted insight into the nature and processes of changes that occurred. These processes were examined in light of Leithwood's work on teacher development and Fullan's thoughts on educational change. Using these models as an analytical framework, an evaluation was made of the potential uses and value of repertory grid technique in middle schools. The technique aligns well with the Leithwood and Fullan models and has notable benefits and advantages to offer the field of educational leadership.

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Chapter 1: Introduction

Preamble

Much of my working life has been spent working with middle years aged children in educational and youth work environments. As a result, considerable time and energy has been expended developing further understanding of what contributes to effective learning environments for this age range of students. Perusal of relevant literature reveals a long history of creative and imaginative ideas regarding middle years educational practice. Direct experiences in schools, however, suggest that implementing developmentally appropriate ideas in middle schools is one that is fraught with difficulty.

As a potential school administrator aiming to create and facilitate such an environment, there is an imperative for me to have an understanding of the factors at play in such a workplace, and how I might best influence them. A common theme in modern leadership literature is the idea that a core leadership activity must be that of actively creating dialogue, reflection and understanding of perspectives amongst members of a school community. Much as such a statement has intuitive appeal, it ignores the very real question of what type of tools are available to administrators to assist in bringing about these levels of understanding. A school is a site of complex cultural conflict. It therefore requires tools that elicit deeper understanding of the mental processes by which everyone anticipates events and subsequently acts. *Personal Construct Theory* and its principal application of *Repertory Grid Technique* are a method by which this deeper understanding may be developed. The objective of this thesis was to create a vehicle by which these avenues of thinking might be explored, namely, how repertory grid technique might facilitate and promote effective change in middle years educational practice as part of a model of collaborative reflective practice.

Background of the Study

The historical development of thought and practice around middle level education has been well documented. Brough (1995), Lounsbury (1992), Clark and Clark (1994), Beane (2001) and Erb (2001) all provide useful insight into the evolution of schools' organization and philosophy in North America. Lounsbury (1992) described how in the late 19th century, schooling worked on an *8-4 plan* (p. 4), with eight years being allocated to primary education for the majority of the population. For many, this would represent the end of their formal schooling, with only a relatively small number of students progressing to the high school, whose primary focus was that of preparation for college or university. He went on to detail a variety of re-organizational pressures and themes that surfaced over the next 25 years. These included proposals from universities for better preparation of students, through a longer high school program (the *6-6 plan*), proposals to reorganize the 7th, 8th and 9th grades in order to address the alarming drop out and repeating grade rates, improving the 'holding power' of the school in order to offer greater vocational and civics programs to burgeoning immigrant populations and the perceived need to more successfully 'bridge the gap' between elementary and high school environments. Advances and greater acceptance in the fledgling field of psychology provided impetus for reorganization based on meeting the needs of young adolescents.

Lounsbury (1992, p. 6) suggested that an allied factor to the acceptance of such ideas was wider societal and cultural forces that were supportive of growth and experimentation at the time. By 1918, he noted, the Report of the Commission on the Reorganization of Secondary Education was proposing a *6-3-3 plan* of elementary, junior high and senior high schools as the optimal way to reorganize schools. In examining the

original set of premises behind the junior high school, as laid out in the commission's report, he made the following observation:

Notice particularly the recognition given to helping "the pupil to explore his own aptitudes," to the advocacy of a "gradual introduction of departmentalized instruction," and a call for "a social organization that calls forth initiative and develops the sense of personal responsibility for the welfare of the group." These statements seem quite "middle school" and make evident that the problem with the junior high school was not in its intention but in its implementation.

(Lounsbury, 1992, pp. 6-7)

Knowles and Brown (2000) detailed several of these implementation problems, including most significantly, a lack of staff suitably trained or qualified to understand the nature of adolescent development and how to meet their unique cognitive, social and emotional needs. Furthermore, they note junior high schools tended towards traditional content-specific curricula instead of a more active and practical design, and used what they describe as a *factory model* of timetabling (p. 45). Similarly, Lounsbury (1992) noted a number of implementation obstacles, including the lack of specific junior high teacher preparation. He suggested this led to jobs in junior high schools being seen as stepping stones to jobs in the more prestigious high school, and also to the dominance on many levels of traditional high school approaches ill-suited to the needs of young adolescents. A further handicap, he noted, concerned the way in which, for reasons of demographic expediency, junior high schools were frequently located in the former high schools, and lacked adequate facilities for appropriate programs (pp. 8-9).

Brough (1995, pp. 37-38) suggested that throughout the 1950s and 1960s, a variety of societal factors as diverse as the civil rights movement and the space race led to the call for educational change. It became generally accepted that this replication of high school approaches was meeting neither existing nor rapidly emerging needs.

Subsequently, Brough (1995, pp. 42-47) described the emergence in the 1960s and 1970s of the Middle School Movement. Following the recommendations of groups such as the Association for Supervision and Curriculum Development (ASCD) Working Group on the Middle School and the Early Adolescent Learner, groups of educators began organizing the early middle school conferences that lead to the eventual formation in 1973 of the National Middle School Association (NMSA). During this same period, as Knowles and Brown (2000) outlined, an important demographic influence was at play. They noted the way in which *baby boomlets* (the young children of the original generation of baby boomers) were flooding elementary schools (p. 47). At the same time, many high schools were experiencing excess capacity as the peak of the baby boom generation graduated. They suggested that in response, many areas reorganized their schools by moving grade nine into high schools, and grade six and sometimes five into the junior high school. This often proved detrimental. Names were changed to *Middle School*, with no real change of programming or philosophy, nor extra training of staff. As Beane (2001) recounted:

...many within the middle level community itself failed to fully embrace the philosophical and pedagogical grounds of the middle school movement. For some, the move to the middle school meant little more than changing the name on the school stationery. For others, the move amounted to implementing one or a

few structural innovations that improved school climate but accomplished little else. (p. xvii)

Brough (1995) suggested that it was in response to such concerns that the NMSA developed and published their initial position paper, *This We Believe* (1982). She further noted how the document became the definitive statement of the middle school concept with its listing of ten essential elements. These included: educators knowledgeable about and committed to young adolescents, a balanced curriculum focused on young people's needs, a range of organizational arrangements, variety in instructional strategies, a program of exploratory activities, comprehensive counseling and advisory services, continuous progress for students, appropriate evaluation, cooperative planning amongst staff and a focus on positive school climate (p. 44). In spite of such statements of intent, Knowles and Brown (2001, pp. 47-51) noted the continued and ongoing implementation struggles of establishing effective middle schools over the next twenty years. They suggested this resulted in further studies and recommendations such as those of the Carnegie Council on Adolescent Development (1989), and revisions of the NMSA's (1992) position paper *This We Believe: Developmentally Responsive Middle Schools*. In spite of such efforts, the middle school movement appeared to be stalled once more.

Brough (1995, p. 47) discussed Larry Cuban's observation that,

After a quarter of a century of experience with middle schools, there is much evidence that what has most changed in the new middle schools has been the policy talk, the formal names of schools, and the vocabulary of educators. In addition to the shifts in talk and adoption of policies, there have been incremental changes in organization, curriculum and instruction. But not fundamentally the

values! These add-ons have occurred in great frequency in many middle schools, as reported in surveys of teachers, principals, and superintendents. But the vast majority of schools housing early adolescents, especially in cities, resemble the junior highs they were supposed to reform

(Cuban, 1992, p. 246)

A perusal of titles such as Clark and Clark's (1994) *Restructuring the Middle Level School: Implications for School Leaders*, Irvin's (1992) *Transforming Middle Level Education: Perspectives and Possibilities*, and Dickinson's (2001) *Reinventing the Middle School: A Proposal to Counter Arrested Development* reveals a deep seated dissatisfaction with the current state of middle level education. The latter study by Dickinson (2001, pp. 5-15) cogently examined the elements and factors that have lead to this state of so-called arrested development. He pointed to the historical lack of middle school teacher education programs previously identified, and additionally suggested the absence of middle school principal preparation programs as a key element. In addition, he pointed to the perception that there is an inability to balance the notion of good places for young adolescents to learn with a challenging and rigorous academic environment. Other elements identified include a hesitancy to implement an integrated curriculum, a lack of effective research, unresponsive curriculum policy making, and poor or unrealized leadership on the part of the NMSA. Most significant, he suggested, has been the use of an *incremental stage implementation model*. As he stated,

The use of this model, which atomizes aspects of the middle school concept to be developed and implemented, is unfortunate since it does not apply to a concept that is a total ecology of schooling rather than a package of parts. The middle

school concept, as a total ecology, is made up of both horizontal and vertical aspects, all interrelated.

(Dickinson, 2001, p. 14)

For Dickinson, if the middle school were to be successful, the starting point was to acknowledge the considerable complexity of the original idea as a totally integrated organizational/curricular/instructional/relational/developmental concept. He stated, “To reinvent middle schools mired in a state of arrested development, we must first acknowledge where we are – as painful as that may be. Then, we must examine both our attitudes and practices and begin to rework our schools” (Dickinson, 2001, p. 16).

Attempting to provide a Canadian focus for the middle school debate is difficult at best. The existing body of literature is almost exclusively based on experiences in the United States. Many of the demographic factors already discussed are broadly relevant to the Canadian experience, although it is worth noting that driving features such as the move towards desegregation of schools in the 1950s were largely unique to the United States. A further complicating factor in discussing the Canadian perspective concerns the provincial jurisdictional status of education. A review of levels used within elementary and secondary schools by various provinces and territories revealed nine separate models. (Council of Ministers of Education of Canada, 2005, p. 4). Furthermore, the study suggests little congruence exists between provincial models, some being organized on a 6-3-3 or 5-4-3 model (early years/middle years/senior years), others on an 8-4 model (elementary/secondary), with numerous variations in between. Throughout the report the terms ‘junior high’ and ‘middle years’ are used synonymously.

In spite of these limitations, middle years organization and philosophy has permeated the Canadian experience in a number of ways. The NMSA has provincial affiliate organizations in British Columbia, Alberta, Saskatchewan, Manitoba and Ontario. These grassroots, teacher-led committees promote middle years practice through professional conferences and advocacy work. Similarly, middle years philosophy and practice is acknowledged within certain provincial position papers and reports. *Current and Emerging Research on Successful Junior High Schools: The Middle Years* (Province of Nova Scotia, 1997) is a more recent document of this type. It acknowledges many of the existing middle years ideas on themes of curriculum, school organization, assessment, active learning and supportive learning environments. It does not, however, prescribe or recommend practices for adoption, stating, “It is hoped that this review and overview will help teachers, parents, and others in the school community to identify priorities for improvement and consider approaches, strategies, and structures for improving the learning experiences and conditions for young adolescents” (Province of Nova Scotia, 1997, p. 5).

An interesting contrast, albeit two decades earlier, is provided by a report produced by Manitoba Department of Education (Manitoba Department of Education, 1976). Surveying all 437 schools in Manitoba encompassing Grades 7 to 9, the authors concluded,

It would appear that the dominant operating mode of the middle years school in Manitoba is patterned on the high school. This mode features specialization, subject emphasis, subject promotion, six-day cycles and options. It also features

subject-teacher and subject-period time scheduling. The mode is highly prevalent.

The operating model is, in fact, a junior high school.

(Manitoba Department of Education, 1976, p. 38).

The report went on to make several pertinent observations. Firstly, it found that a sharp shift in programming was experienced by most students in Manitoba between grades 6 and 7. It noted how this shift occurred in spite of the fact that almost 60 per cent of schools in the province at the time were organized from Kindergarden to Grade 9. The report's second observation was to suggest "The rationale for such a sharp shift in programming is obscure since it is not possible to identify a discontinuity in the physical, mental and emotional development of children to warrant it" (Manitoba Department of Education, 1976, p. 38). It further noted that the survey suggested the junior high concept was very firmly entrenched in the minds of teachers, leading them to the conclusion that any future developments would likely be improvements on existing concepts rather than alternate approaches.

The follow up position paper *Education in the Middle Years: Position Paper of the Middle Years Program Review Committee* (Manitoba Department of Education, 1977), took a more direct approach. Drawing on a variety of 1970s middle school literature, the paper advocated strongly for adoption of many of the broad principles of middle years philosophy and practice. Although stopping short of recommending a specific reorganization of junior high schools into middle schools (as was largely the case in the United States), it did suggest the replacement of *junior high* with the term *middle years*. This was believed to be indicative of the need for a change in educational philosophy to more effectively meet the needs of adolescents. With hindsight, it is

possible to see many of the position paper's recommendations within subsequent decisions and publications of Manitoba's educational institutions. The middle school concept has been adopted wholeheartedly in some school divisions, while in others attempts have been made to adapt middle years programming to the existing building structures. Likewise, the position paper's observation on the need for specific middle years pre-service teacher education has been implemented at all four faculties of education in Manitoba. The report's calls for individualized instruction, multi-media/multi-text approaches, curriculum integration and a variety of gender/age/race/ability perspectives are clearly addressed in documents such as *Success For All Learners* (Manitoba Department of Education, 1996), and subsequent curriculum documents.

In spite of these apparent areas of development in Manitoba (albeit within a lengthy 30 year frame of reference), it is within the report's assessment of qualities needed in middle years educators that a portent can be seen of where the committee anticipated some of the real difficulties in implementation might eventually lie.

The success of any educational organization assessed in terms of the progress and achievements of the child concerned is less dependent upon the particular form of that organization than on the attitude of the teachers who function within its framework, even though the form of the educational organization to a degree defines the limits of the process within it.

(Manitoba Department of Education, 1977, p. 30)

The report listed a number of desirable characteristics, attitudes and competencies necessary for middle years teachers. It also noted the importance both of teacher

professionalism, and of continuing school-based professional development focused on tackling 'building level' problems identified by teachers and students. In common with much of the middle years literature discussed from the United States, it offered few practical ideas or processes by which this professionalism could be nurtured.

A more current Manitoba perspective is provided by *Engaging Middle Years Students in Learning: Transforming Middle Years Education in Manitoba* (Manitoba Education, Citizenship and Youth, 2009). In spite of the passage of over 30 years, a familiar pattern is noted. "Some jurisdictions in Manitoba have successfully implemented reforms of their Middle Years practice already, but broad, systemic change is not yet widely evident across the province" (p. 4). Numerous contributing factors are noted in the paper: There are a wide variety of grade configurations within which middle years education is delivered. There is a tendency for plant and facilities to resemble small high schools rather than being middle years specific designs. A lack of clarity exists regarding the meaning of designations such as *middle years* or *junior high school*. There are varying levels of commitment to the middle years concept across the province amongst teachers, educational leaders, school boards and parents. Timetabling by subject leads many students to interact with a large number of teachers. Continuing education on middle years themes with veteran teachers is sporadic and localized, and the majority of current teachers acting as mentors to new or student teachers were trained in the older elementary or secondary models. All of these points sound extremely familiar. A less common barrier noted by the report was the disparity between curricula packaged by grade and subject, and the need for integrated interdisciplinary planning in the middle years. Difficulties dealing with the diversity of cultural, linguistic and socio-economic

backgrounds present in Manitoba were also noted, as were the demands of balancing programs to meet both academic and non-academic student needs (pp. 4 – 5). Of significance for this study, it was noted:

Middle Years teachers and administrators continue to work largely in isolation.

The notion that educators are “private” practitioners, who teach ‘their’ students in ‘their’ classrooms with ‘their’ personal interpretations of curricula, is reinforced by staffing policies, timetables, and the physical layout of schools.

(Manitoba Education, Citizenship and Youth, 2009, p. 5)

In order to address these issues, the report suggested a number of actions are needed to engage students in learning: Teachers must develop more awareness of the variety of challenges faced by young adolescents. Curriculum, instruction and assessment practices must be responsive to student needs. Educators must build stronger learning relationships with students. There must be greater room for student voice, choice and responsibility in the classroom, and community involvement must be strengthened (pp. 8 – 20). Further to these points, the report noted the implications of these action steps for principals. Factors such as the ability to establish trust, support change and set the interpersonal and intellectual tone of the school were seen as critical functions. Such abilities were seen to enable the building of capacity in teachers. This increases involvement in the making of decisions that support the actions noted above, allowing teachers to act as agents of change within a school. The report suggested this can counter-balance the tendency of an organizational structure to act as a force of conservatism (p. 22).

Many of the themes noted above resonated strongly with my experience of middle years education in Manitoba thus far. For approximately five years previous to the study, time in my school had been devoted at staff meetings and professional development days to the discussion of principles of effective middle years education and whether they should be implemented at the school. In spite of the resources allocated, very little action had occurred on the subject. Curriculum, staffing and timetabling issues have played a large role in limiting my school's capacity to become more responsive and implementation has proved to be difficult.

As can be seen from this historical examination of the theory and practice of educating adolescents in North America, it would appear that

It's implementation that repeatedly defeats us, not imagination – the challenge is not in identifying the structures and processes of schooling for young adolescents that are different and better. The problem is how to convert aspirations and imagination into living reality in our classrooms and schools.

(Hargreaves, Earl & Ryan, 1996, p. 26)

This theme is echoed and amplified within the field of educational administration. Clearly, for an educational administrator endeavouring to take a leadership role in creating or sustaining a developmentally responsive middle school, significant challenges exist. In his preface to *The Educational Leadership Challenge: Redefining Leadership for the 21st Century*, Murphy (2002a) suggested a case be made for re-grounding the profession of educational administration to deal with such challenges. He based this assertion on the profession's need to respond to the radical political, social and economic changes that shape the environment of schools in the 21st century (p. xi). Identifying these

changes in more detail, Lugg, Bulkley, Firestone and Garner (2002) pointed to changes in politics, economics and demographics, as well as a new climate regarding accountability, finance and staffing. In a discussion of how to *reculture* the profession, Murphy (2002b) elaborated his notion of re-grounding, and suggested three vital metaphorical roles that educational leaders in the 21st century must assume: *moral steward*, *educator* and *community builder* (pp. 75-78).

Looking at these three roles in more detail, Murphy suggested the role of moral steward is driven by an ongoing examination of values. Furthermore, he argued that such a role would necessitate greater investment in activities of reflective analysis and purpose- defining, as opposed to more traditional management functions. Imperative to such a role would be not only a strongly developed set of personal beliefs and values, but also the capacity to analyze critically and foster a sense of possibilities in oneself and others. He went on to summarize,

Moral leadership means that tomorrow's school administrators must use their personal platform to "engage participants in the organization and the community in reinterpreting and placing new priorities on guiding values for education"

(Murphy, 2002b, p. 76)

Regarding the role of educator, Murphy (2002b, pp. 76-77) saw acquiring, disseminating and facilitating learning about improvements in instructional and curricular processes to be a vital leadership function. In this way, he suggested, the practice of educational administration can be firmly underpinned by a core of pedagogical principles.

For the community builder metaphor, Murphy (2002b, pp. 77-78) perceived three related dimensions: Firstly, to create *open systems* with parents and members of the

school environment, creating voice and access for all; secondly, to foster amongst professional staff in the school, an environment that supports communities of learning; thirdly, the necessity to create a consistent focus in the school on the individual learning needs of every student. In fulfilling these functions, it was suggested administrators needed to shift from bureaucratic management towards more self critical and reflective styles.

Reviewing these metaphorical roles reveals a clear and consistent common thread. The need for the development of reflective practices within the culture of the school at a variety of levels is paramount. Day and Harris (2002, pp. 963-965), in their analysis of teacher leadership and reflective practice, pointed to the considerable body of research suggesting the need for collaboration in reflective practice. To neglect this vital component will, they suggested “severely limit the desires, capacities and abilities of many teachers to move beyond the ultimately limiting learning from experience” (p. 964). This point notwithstanding, they suggested that factors such as lack of time and the fragmentation and discontinuity of teachers’ learning lives create considerable barriers, leading to “...parochial cultures which cut off schools from opportunities to open up and renew thinking and practice, and hence hamper any progress” (p. 964). For this reason, they suggested the need for discussions and dialogues to take place between educators with common purposes. In this way, practice in schools can be moved forward from the routine to the reflective. Day and Harris (2002, pp. 965-966) suggested three potential benefits to such a strategy. Firstly, since teaching and learning are both highly complex processes with no one correct approach, encouraging cooperative examination of different understandings and practices is likely to lead to improvements. Conversely, a

failure to do so will create teachers who, in often rapidly changing circumstances, remain grounded only in current practice and past experiences. This inevitably leads to decreases in personal effectiveness. A second suggested benefit involves the greater degree of self-knowledge and self challenge accruing to individuals as they engage in reflective practice. The third benefit concerns how:

Reflective practice is considered to be central to the growth of teachers as inquirers who engage in collaborative action research with others from inside and outside the school in generating knowledge of practice rather than finding themselves as objects whose role is to implement existing theory in practice.

(Day & Harris, 2002, p. 966).

Looking at this generated knowledge in a broader context, Day and Harris (2002) suggested that significant change in practice is only achieved through fundamental shifts in beliefs, values and feelings about teaching and learning. The dialectical nature of reflective processes, between thoughts and actions, theory and practice, lends itself well to creating an environment in which such shifts can occur. A thorough examination of actions and their underpinning ideas, subsequently resulting in change, is often referred to as *praxis* (p. 968).

The mental processes involved in praxis are understandably complex. Nonetheless, there is much to be gained from attempting to examine the ways in which reflective practices may cause such shifts to result. Day and Harris (2002) would even argue it as an imperative function.

...the more important need for principals and teacher leaders [is] to be knowledgeable about and engaged in reflective practice as a means of maintaining

professional health, organisational improvement and effective teaching, learning and achievement.

(Day & Harris, 2002, p. 974)

This deeper knowledge of the internal processes by which reflective practice facilitates praxis requires examination of the means by which individuals construct their reality and make decisions. To this end, George Kelly's (1955) personal construct theory provides some useful tools for investigation. Drawing on an epistemological position of constructive alternativism, personal construct theory begins with the basic postulate that "a person's processes are channelized by the ways in which he anticipates events" (Kelly, 2003, p. 7). This suggests humans create meaning by devising constructions to place upon a given situation. The tentative utility of these constructions is then tested against the criteria of successful prediction and control of events. If the constructs permit accurate prediction of events, then they are adopted for a given context. On reaching a point where the accepted constructs no longer allow adequate prediction, new constructs are then proposed and investigated. In order to explore these personal constructs, Kelly developed the technique of *repertory grid interviews*. The technique allows insight into an individual's view of a situation or context, and can be used to investigate how constructs change over a period of time. Further details of this methodology will be provided in the next chapter.

Problem Statement

Having developed the background to the study, it was apparent that the principal research topic was collaborative reflective practice and its effects on construct change for educators. More specifically, the purpose of this action research study was to use repertory grid technique to identify, describe and delineate the personal constructs of

educators within the specified context of what they believe constituted a good school. The study examined the processes by which participation in collaborative reflective practice activity affected the development of these constructs. These findings were examined in light of thinking from the fields of teacher career development and personal coaching theory in an effort to evaluate their possible value for educational leadership.

Significance of the Problem

This action research project contributes to professional understanding on a number of fronts. Day and Harris (2002) suggested that “reflective practice is an important component in fostering and developing both principal and teacher leadership for school improvement which, with some exceptions, is largely absent from the literature of leadership” (p. 958). There exists little documentation of the exact means by which such collaborative reflective practice works to improve schools. The research provides useful insight into the processes of construct change that occur. A further point concerns the intersection of ideas on collaboration, professional cultures and actual classroom practice. In their discussion of schools as cultures, Firestone and Seashore Louis (1999) stated, “Louis, Kruse and Marks (1995) found more intense collaboration in schools with more professional cultures. *Less analyzed is the relationship between collaboration among teachers and the development of codes to construct practice in the classroom...*”[my italics] (p. 306). Such a statement becomes woefully apparent upon delving into current literature on professional learning communities. Eaker, Dufour and Burnette (2002), in their book *Getting Started: Reculturing Schools to Become Professional Learning Communities*, suggested, “Making these cultural shifts is difficult and nonlinear... Remember, what you need to reculture your school lies within. Collaborate with one another. Support one another. Care for one another. Encourage one

another, and remarkable things will happen” (p. 29). Beyond these simple generalizations, very little insight is suggested regarding the mental processes of such reculturing, nor how collaboration might lead to change on a deeper constructual and practical level in the classroom. On a similar note, Dooner, Mandzuk and Clifton (2008, p. 573) made particular reference to the difficulties and challenges involved in developing professional learning communities. They pointed to the need for group members to have a greater understanding of the complex inter-personal dynamics involved in such practices, in order for participants to be able to respond effectively. Although the topic of culture in schools is vast and diverse, this study is of use in beginning to fill such gaps with tangible insight.

Regarding the use of personal construct theory and repertory grid technique, it has been noted that “...despite the fact that Kelly’s theory and methodology form a coherent approach which is consistent with many of the current ideas on education, relatively little use has been made within the educational sphere, of the techniques he evolved” (Pope & Keen, 1981, p. 34). The review of more recent literature in Chapter 2 suggests that this premise continues, in many respects, to still hold true. Pope and Denicolo (2001) attributed this state of affairs to the cultural transmission view of education that has dominated Western educational thought. This view has traditionally led to the adoption of positivist paradigms as the dominant mode of research in education. As alternative perspectives of education have developed and evolved, so too, they argued, have alternative constructions of educational research with their attendant methodologies and epistemologies (p. 50).

It is apparent that within a context of reflective practice in schools, the use of personal construct theory is comparatively novel. That such a methodology has taken a number of decades to be developed, implemented and accepted should come as no surprise; however, Chapter 2 provides evidence for the existence of a significant body of literature supporting its use. I elaborate further on both the theory itself, and the potential for use of Kelly's repertory grid interviews in schools and in regard to reflective practice. In Chapter 3, a detailed methodology is outlined and I explain how tools of repertory grid technique were applied in the study.

Caveats about generalizability notwithstanding, the study provides valid insight into specific processes of collaborative reflective practice, which may be beneficial for schools and educators. These insights can be observed in the results noted in Chapter 4. Furthermore, it has been possible to evaluate the applications and uses of repertory grids and personal construct theory within the field of education. The outcomes and conclusions of this evaluation are discussed further in Chapter 5.

Chapter 2: Literature Review

Review of Theoretical Literature and Conceptual Model of the Study

Upon publication, George Kelly's (1955) *The Psychology of Personal Constructs* represented a profound shift away from the dominant behaviourist psychological theory of the time. Fransella and Neimeyer (2003), in *George Alexander Kelly: The Man and His Theory*, highlighted a number of factors that contributed to the unique nature of Kelly's work. Born to homesteaders on a Kansas farm in 1905, he received no formal education until the age of 13. By 1931, after a period of scattered and fragmented academic progress (including studying engineering, educational sociology and biometrics, and teaching drama, psychology, and speech), he finally earned a PhD in psychology from the University of Iowa. His first employment at Fort Hays Kansas State College was instrumental in developing his thinking about psychological change. Working with children and adults suffering through the hardships of the Great Depression, Kelly initially drew on the theories of Sigmund Freud. Subsequently, he came to the realization that providing clients with a therapist's interpretations was unlikely to elicit change. More important was what the client did with these interpretations. This led him to the conclusion that the main criteria for a therapist-offered conceptualization was its relevance to the client's problem and the implications it might carry for a novel possible solution. In the years after World War Two, Kelly took the post of Director of Clinical Psychology at Ohio State University, where he formalized his theory of personal constructs and its assessment tool, the repertory grid. Upon publication of *The Psychology of Personal Constructs* (Kelly, 1955), response was initially mixed. Fransella and Neimeyer (2003, pp. 21 - 31) referred to an extremely positive review of the time by Jerome Bruner, but went on to outline the variety of difficulties faced by the

theory in gaining acceptance over the past 50 years. Discussing the theory's emergence from the 'normal science' of its day, they suggested "it first represented a radical departure in psychological theory, then moved through the evolution of small 'clusters' and larger 'networks' of like minded researchers, to become the established and diversified 'speciality' it is today" (Fransella & Neimeyer, 2003, p. 27). While remaining a speciality interest among psychologists, it has subsequently gained adherents across the world (notably in the United Kingdom, Germany, Australia, Ireland, Italy, Spain, Canada and the United States).

George Kelly's (2003) personal construct theory begins with the basic postulate that "a person's processes are channelized by the ways in which he anticipates events" (p. 7). This leads to an epistemological position of constructive alternativism, suggesting humans' create meaning by devising constructions to place upon a given situation. The tentative utility of these constructions is then tested against the criteria of successful prediction and control of events. Each set of constructions applies only to a finite number of elements known as its *range of convenience* (p. 8).

Pope and Keen (1981, p. 29) discussed Kelly's view that all events were capable of being construed in an infinite number of ways. For Kelly, absolute notions of truth (knowledge as a growing collection of substantiated facts) were merely 'accumulative fragmentalism' (p. 29). In contrast,

The construction of reality is an active, creative, rational, emotional and pragmatic affair. Man the scientist evolves a set of constructions which he tests out and may ultimately discard in favour of a new set of constructions if the former fails to adequately anticipate events.

(Pope & Keen, 1981, p. 29)

Kelly (2003, pp. 9-16) outlined an elaborating system of corollaries that may be inferred from this basic postulate. In turn, these corollaries shaped and underpinned the methodological development of repertory grid technique. As described by Fransella and Bannister (1977, pp. 1-10), a personal construct system is a hierarchically linked set of bipolar constructs (e.g., nice and nasty, or helpful and obstinate). They emphasized that a construct is a discrimination between events rather than a verbal label. It is “a way in which two or more things are alike and thereby different from a third or more things” (Fransella & Bannister, 1977, p. 5). A repertory grid then, provides information on how such a system is structured or evolving, by examining the discriminations involved. As Fransella and Bannister stated,

A grid is perhaps best looked on as a particular form of structured interview. Our usual way of exploring another person’s construct system is by conversation.

...The grid formalises this process and assigns mathematical values to the relationships between a person’s constructs. It enables us to focus on particular subsystems of construing and to note what is individual and surprising about the structure and content of a person’s outlook on the world.

(Fransella & Bannister, 1977, p. 4)

This idea of a repertory grid as structured interview, while being a simplification, provides sufficient detail for now. A more detailed discussion of repertory grid technique will follow in Chapter 3.

Another useful feature of personal construct theory are a number of models used to explain how changes in construing might possibly occur. Jankowicz identified them as:

1. The experience cycle (construing over time consists of stages of anticipation, investment, encounter, assessment and constructive revision).
2. The creativity cycle (which alternates between tight construing for effective action, subsequent loose construing in order to search for alternatives, followed by renewed tighter construing using the revised set of constructs).
3. The C-P-C cycle, which stands for circumspection, pre-emption and control. In this model, an individual deals with issues by first examining propositional constructs within their repertoire that may be relevant. Focusing on a single issue, pre-emptive construal then takes place. The control phase refers to the decision that is made regarding which pole of a construct to use and relate to.

(Jankowicz, 2004, pp. 216-218)

These models provided a framework for investigating the nature and processes of construct change amongst participants. They were directly inferred from Kelly's corollaries, and are hence methodologically congruent. Furthermore, Jankowicz (2004, pp. 71-233) outlined a clear format for analysis of repertory grid results with participants. Using a variety of statistical and iterative methods, he detailed clearly how the technique could be used to develop deeper levels of understanding and knowledge with participants.

These formats were especially useful within the context of my study as an action research project.

Implicit within personal construct theory is the rejection of positivist methodological paradigms. Chiari and Nuzzo (2003, pp. 41-45) attempted to place Kelly's constructive alternativism within a context of modern philosophy and contemporary psychology. They noted its consistency with a move away from inductive processes and towards deductive ones. This involves moving from the scientific inquiry model of observing in order to know, towards knowing in order to observe. They also suggested that the philosophical underpinnings of personal construct theory place it outside of traditional cognitive theory, with greater parallels to recent constructivist and social constructionist approaches. As they noted, "Essentially, the social constructionist movement emphasizes the generation of meanings by people as they collectively generate descriptions and explanations in language" (Chiari & Nuzzo, 2003, p. 46). On this basis, personal construct theory can be placed within a distinctly post-modern frame of reference. Although not specifically designed to challenge the tenets of scientific positivism, such positioning of personal construct theory goes a long way to explaining its slow rate of acceptance within the field of modern psychology. Nonetheless, given the collaborative imperative present in reflective practice literature, the adoption of a methodology that encompasses how knowledge, understandings and beliefs are socially generated is valuable.

Inevitably, in attempting to make sense of descriptions and explanations generated by participants, it was useful to make reference to certain theoretical models. During the course of my study, it became apparent that stages of personal psychological

development had significant influence on the nature, formation and subsequent change of a participant's constructs. In their book *How Coaching Works: The Essential Guide to the History and Practice of Effective Coaching*, O'Connor and Lages (2007, pp. 220-228) discussed the theory of *developmental coaching*. Based on the work of Robert Kegan, it posits that adults naturally gravitate towards certain developmental stages. Mental and emotional growth in its various forms allows humans to pass from one stage to another, either temporarily or on a more permanent basis. A developmental coach facilitates this movement. Beginning with the onset of formal reasoning as a first stage, O'Connor and Lages list the subsequent stages as individualist, community member, self-authoring and self-aware. An understanding of these stages, and the difficulties associated with moving from one stage to the next, provided a useful frame for analysis.

A second model used in the study related to Novak's (1998) work on the nature and processes of meaningful learning. He suggested that the elements of cognitive learning (in the form of representations, conceptions and propositions) interact with each other to create understanding. Meaning becomes a composite of the propositions that we know that contain a concept. While concept formation describes the regularities perceived as a result of concrete experience with objects and events, concept assimilation describes how concepts are linked together to create more powerful new and meaningful learning that produces constructive changes in a learner's network of neurons. The processes by which this learning occurs are discussed in more detail in Chapter 5, where I analyze the construct changes observed over the course of the study.

As the study proceeded, it became increasingly clear that changes in constructs were indicators of teacher development. In evaluating the potential for use of repertory grid

technique, Leithwood's model of interrelated dimensions of teacher development (1990, p. 88) provided a useful synthesis against which to frame the possibilities. Linking together the areas of teachers' psychological, professional and career-cycle development, he made a strong case for using his model as a foundation upon which instructional leadership and teacher development strategies could be based. In Chapter 5, I have evaluated the potential for repertory grid technique in schools using as a reference point his four guidelines for establishing school structures that facilitate teacher development.

Review of Empirical Literature

The empirical literature on the use of personal construct theory and repertory grid technique in schools could be reasonably described as emergent. Although the theory was first advanced over 50 years ago, until recently it has struggled to find epistemological acceptance within the psychological mainstream.

Twenty-eight years ago, Pope and Keen (1981) suggested, "Existing literature on educational psychology has omitted to place what we consider to be adequate emphasis on the work of George Kelly and subsequent developments of personal construct theory" (p. vii). Later in the book, they describe the exhaustive search undertaken prior to compiling their chapter on current educational applications of personal construct psychology, and lament the fact that such a search revealed only thirty-four citations, (Pope & Keen, 1981, p. 136). They grouped these studies into five categories: repertory grid applications in education, management education, vocational guidance and training, teacher (and teaching) assessment, and finally, curriculum development.

Of these categories, the most significant for this study were teacher (and teaching) assessment and curriculum development. Pope and Keen (1981, p. 143) noted a paper by Olson (1980) describing a project in which he used repertory grid techniques to

investigate why innovative curriculum ideas were rarely fully implemented. He completed repertory grid interviews to discover teachers' constructs about their work. A primary construct for the interviewees related to how teaching activities were seen as having high and low influence. Teachers were used to seeing high influence in the classroom as being an indicator of something being accomplished. New curriculum innovations were often perceived to diffuse high influence roles and hence not give educators a sense of accomplishment. This factor was suggested as a possible explanation for the frequent failure of seemingly innovative curriculum ideas (Pope & Keen, 1981, p. 143). Clearly the paper discussed bears some similarities to the present study, with regards to improving understanding of why curriculum innovation often fails. My study differs significantly however, through its focus on investigating the role of collaborative reflective practice as a potential tool for resolving such issues.

In the *Handbook of Educational Psychology* (Berliner & Calfee, 1996), personal construct psychology merits but one reference (pp. 709 – 710), that being in Calderhead's (1996) chapter on research into the beliefs and knowledge of teachers. He suggested that in the 1970s, dissatisfaction with the narrow focus of behaviourist studies led to greater acceptance of cognitive psychology. The increasing recognition of the centrality of the teacher in educational processes contributed still further to the growth in research in this area (Calderhead, 1996, pp. 709-710). Discussing the variety of methods used to explore teacher cognition, he noted:

The exploration of teachers' cognitions has led to the development of a range of innovative methods for collecting evidence about teaching. *Observation alone is*

of limited value, for the cognitive acts under investigation are normally covert and beyond immediate access to the researcher [my italics].

(Calderhead, 1996, p. 711)

He mentioned repertory grid theory and concept mapping alongside other methodologies such as ethnography, case studies, narratives, commentaries and simulations, noting in particular their useful role in examining changes in teachers' conceptions over time. He also pointed out that repertory grids are relatively easy to use, and are adaptable to a variety of different contexts. His principal caveat against them was that they might impose a bipolar structure on knowledge that could misrepresent its nature (Calderhead, 1996, p. 712). Such an argument was common amongst psychologists, but was countered by Fransella and Bannister (1977, pp. 4-5), who insisted upon the need for repertory grid technique to be viewed within its proper context as a technique of personal construct theory. They argued that to suggest that construct theory was no more than the imposition of a bipolar structure on knowledge was a gross oversimplification that significantly understated the elegance and conceptual depth of the theory.

In his more general notes on the implications of research on teachers' cognitions, Calderhead made a number of observations relevant to this study. Specifically he pointed to evidence that professional development activities ultimately lie at the heart of all attempts at school re-organization, curriculum development and improving teacher effectiveness (Calderhead, 1996, p. 721). Further to this he stated:

The processes of curriculum change involve teachers as interpreters of ideas and holders of values, influenced by a range of previous experiences, who work within institutions involving complex interactions of ideas and actions.

Curriculum change is not easily represented in mechanistic terms; it is more of an organic, interactive process.

(Calderhead, 1996, p. 721)

It is on the complex and subtle nature of these processes that this study sheds light.

The *International Handbook of Personal Construct Psychology* (Fransella, 2003) contains chapters on several educational uses of repertory grid technique such as children's development of personal constructs, and constructive intervention. A number of chapters deal with broader educational subjects (teacher student relations, construal of teaching, the value of construct psychology to teachers working in a market driven educational system). Within the same volume, a number of papers discuss studies of the struggles of organizational transitions (Cornelius, 2003), clarifying corporate values (Brophy, 2003), and making sense of the *group mind* (Robertson, 2003).

Similarly, a search for 'reflective practice' on the *Personal Construct Psychology References Database* at the University of Wollongong (2006) revealed only one citation of significance to the proposed study. This related to the work of Boxer (1981), who used personal construct psychology and repertory grid technique within the context of decision making for managers. Beginning with the assumption that judgment is subject-referenced, he described a method by which managers were able to collectively explore their subject-referenced knowledge in relation to a given problem context. The method involved three stages. Firstly, reflective analysis enabled managers to recognize their own subject-referenced knowledge in relation to the problem. Consensus generation then allowed them to mutually explore the relations and relatedness of subject-referenced knowledge. Lastly, strategic design built on the shared language negotiated by the

managers, allowed them to examine the value trade offs resulting from the selection of different strategic options (pp. 45 - 50).

In spite of its business oriented context and language, this work has some interesting parallels to the world of education, and to this study in particular. Specifically, it looks beyond the difficulties of decision-making and change, and attempts instead to unravel the reasons and processes behind them. In discussing the practice of reflective analysis using repertory grid technique Boxer noted,

As a tool for enabling greater effectiveness in the process of strategic management it could perhaps have large impact on the structural ossification of his [the manager's] society. In the long run, however, its importance will be as a practical way both of developing people's sensitivity to the possibility of change, and also of developing their capacity for learning.

(Boxer, 1981, p. 80)

The works cited serve as a useful backdrop to the study, however only Boxer's (1981) deals specifically with the links between collaborative reflective practice, its role in construct change, and its potential for increasing the effectiveness of complex organizational change.

Clearly, given the promise expressed and anticipated by Boxer for the working method, it seemed worthwhile to attempt an investigation within an educational setting. As stated earlier, my study was conducted as action research, with the principal objectives of investigating the personal constructs of middle years educators. The study looked at the specific context of what constructs related to their perspectives of a good school. Furthermore, the processes by which participation in collaborative reflective

practice activity affected these constructs were examined with reference to models of construct change and meaningful learning. Evaluation of repertory grid technique as a tool for teacher development was carried out using Leithwood's (1990) model of interrelated dimensions of teacher development.

At first glance, repertory grid technique might appear to be a comparatively novel method for investigation. In Chapter 3, I describe the methodology of this study in greater detail. Careful examination reveals a strong justification for the use of repertory grid technique. As I have already suggested, Calderhead (1996, p. 711) noted the covert nature of many cognitive acts, and the resulting research imperative for the use of varied methodologies such as repertory grid theory and concept mapping. Their use allows for movement beyond mere observation; investigation of deeper levels of knowing becomes possible. He also pointed to the adaptability of repertory grid technique, its relative ease of use, and utility for exploring changes in teachers' conceptions over time. All of these features are attractive for action research such as the present study. A further justification for my choice of methodology relates to a point previously noted by Fransella and Bannister (1977, pp. 4-5). In the next chapter, I will discuss a number of techniques used in the study as part of repertory grid technique. Techniques such as construct elicitation, cluster analysis, principal components analysis and messy change grid analysis should all be viewed within their proper context as techniques of personal construct theory. As they are all derived from the same underlying theory, they share a high level of internal congruency with each other. As I will show, this makes the technique well suited to the specific context of my research.

Chapter 3: Methodology

This chapter explains the perspectives and methods used in carrying out the study, giving special emphasis to the research design and data collection and analysis.

General Perspective

The research followed a qualitative perspective, making use of an iterative and multi-dimensional action research methodology. The research made use of a number of tools, all centred on a collaborative book study that took part in the author's school. Tools used included: (1) pre and post book study repertory grid technique interviews; (2) analysis of repertory grid interviews using cluster analysis; (3) principal components analysis; (4) interviews with book study participants to discuss the repertory grid interview results and (5) structured interviews with participants using messy change grid analysis (Jankowicz, 2004, p. 214) to analyze construct change.

Context of Research

As suggested in Chapter 2, the study used an action research model to determine the ways in which participation in a collaborative reflective practice activity affected change in the personal constructs of educators. Noffke (1995) suggested action research "involves the improvement of practice, of the understanding of practice, and of the situations in which practice occurs" (p. 5). McNiff and Whitehead (2002, pp. 39-58) located action research within the paradigm of critical theoretic research (as opposed to empirical or interpretive research). In their discussion of key theorists in action research they noted the considerable divide emerging between interpretive approaches, critical theoretic approaches and living theory approaches. For the purposes of the study, a living theory approach was adopted. The theory assumes knowledge is something that people generate for themselves as they work through issues and dilemmas. As McNiff and

Whitehead suggested, “Action research is a methodology that is developed from within practice, a process of trying to understand how values may be lived in practice” (pp. 39-40). Furthermore, the study adopted an internal “I-theory” approach (pp. 54-55). The purpose of internally based I-theory action research is for practitioners to produce descriptions and explanations for their own learning. This contrasts with more dominant external “E-theories” of action research. The following provides clarification:

Social scientific enquiries lead to knowledge about the world, as they are conducted from the perspective of external researchers who are aiming to understand and describe a situation as an object of study (and develop E-theories). Educational enquiries (I-systems of knowledge) lead to knowledge of self within a world which the researcher co-creates with others who are similarly occupied (and develop I-theories of practice). The reflective practice which characterises these efforts is a form of practical theorising which can lead to the evolution of good social orders.

(McNiff & Whitehead, 2002, p. 55)

The views of Pope and Denicolo (2001, pp. 47-65) support this position as it applies to a study involving personal construct psychology. They, too, noted the tendency of positivist paradigms to dominate educational research, but pointed to phenomenological alternatives aimed at understanding individual perspectives, using methodologies focusing on the interactions and language of participants. They argued that the use of personal construct theory and associated constructivist techniques offered a design that placed paramount importance on the views of those actually involved in the educational process. Further noting the parallels, they pointed to the emphasis that action

research placed on participatory and collaborative enquiry models. Pope and Denicolo (2001) suggested this encourages teachers to ground analysis within their own reflective practices and contexts (as opposed to relying upon broader theories of psychology, sociology and philosophy). This authentic contextual relevance and the facilitation of participants' contributing and applying ongoing research in a practical way are of fundamental importance and are central to the idea of action research as a form of praxis, the means by which educators can connect and embody abstract concepts within their lived realities (pp. 62-63).

Limitations and Methodological Considerations

Adoption of the research methodology outlined above imposed a number of limitations on the study that were taken into consideration. Pope and Denicolo (2001, p. 59) suggested the first of these involves recognition on the part of the researcher(s) that results will be a working hypothesis, quite likely subject to subsequent reconstrual. As such, generalizability will be limited. Individual readers will need to assess the degree of fit between their own contexts and the context described in the study. A further point concerns the utility of the study. Discussing Kelly's formative thinking on the subject, Pope and Denicolo (2001, p. 59) noted utility as a critical criteria for evaluation. The research should ideally give rise to *emancipatory praxis*, wherein participants develop new ways of incorporating theory into practice that provide liberation from predominant confining patterns.

Other possible limitations that were considered within the design included the non-random selection of participants and their limited number, the possibilities for social desirability bias (participants giving what they believe to be the 'right' answer as determined by the researcher), the researcher's limited experience in repertory grid

technique, and issues surrounding analysis and interpretation of data. All of these limitations had the potential to influence the validity and reliability of the study. Such terms however, can be problematic within the context of the chosen methodology, and thus require further clarification. Given the point stated earlier that working hypotheses may be reconstrued over time, the notion of reliability is reduced to a measure of a construct's insensitivity to change. At this level, "reliability is perhaps best seen as merely one aspect of validity" (Fransella & Bannister, 1977, p. 8). Logically then, reliability becomes a function of validity.

Lincoln and Guba (1985, p. 222) suggested that validity in constructivist research becomes a question of the trustworthiness or credibility of the data to those intimate with the context. The rigour of the research can be demonstrated through articulation of the research protocol, significant levels of verbatim evidence for interpretations, and a concern for authenticity. They further subdivided authenticity into ontological, educative, catalytic and tactical categories (p. 223). Ontological authenticity emphasizes the function of personal constructions. The use of repertory grid technique in the study was designed to enhance this aspect by allowing individual participants an opportunity to discover and reflect on their own personal constructs as they related to a given area of their educational thinking (*a range of convenience*). Educative authenticity refers to how understandings and appreciations of others' constructions are enhanced by the research. The use of collaborative reflective practice in the study addressed this issue through enabling participants to share their ideas and discoveries. Catalytic authenticity in action research describes the degree to which research promotes action. Tactical authenticity deals with how the research empowers action to take place. Evidence for these forms of

authenticity was gathered in the follow up interviews of the project design, as specified in the methodology section below. On a similar note, Pope and Denicolo (2001) suggested that this concern for authenticity implied the need for such research to take an iterative and interactive stance, where a range of techniques was used to make successive approximations. As they suggested, “the qualitative educational researcher as constructivist will employ the art of the skilled conversationalist” (p. 61).

In spite of the limitations observed, there exist notable intersections between action research as praxis and I-theory approach, and between emancipatory praxis and personal construct theory. This, combined with the congruency of repertory grid techniques themselves as integral components within a broader theory, provided a consistent and compelling argument for adoption of the proposed methodology.

Context and Access of the Study

As action research, the study was conducted within the context of the author’s school. The time frame was March 2007 to May 2008. Access was formally secured at school and divisional level. Additionally, a formal application was made to, and approved by, the Education/Nursing Research Ethics Board at the University of Manitoba (Protocol #E2006:82. See Appendix A). Considerable alignment existed between the study and professional development emphases of the school and division.

Participants

In the interests of frugality and practicality, the study focused on three middle years educators. In November 2006, a letter was sent to all middle years staff at my school, inviting them to volunteer to take part in an after-school collaborative book study group (see item one in Figure 1). This resulted in nine positive responses out of a possible

20 (including myself). While my participation could appear unorthodox within a positivist paradigm, it has already been established in Chapter Two that the study was conducted within a significantly different methodological context, and was hence appropriate.

From this larger group taking part in the book study, three participants were selected and approached to volunteer for further study (see item two in Figure 1). Criteria for selection included pragmatic concerns (e.g., were they able to spare the time to participate in the book study and follow up interviews?) in addition to a desire for a balance of age, gender and teaching experiences. However, as Noffke (1995) has noted, “In the collection of data, or evidence, related to practice, action research emphasizes the educator’s own, often intuitive, judgments of teaching and helps to locate one’s vision of good teaching within those of others involved in the educative process” (p. 5). As action research, the sample size of three participants and the means by which they were selected was of limited consequence as compared to the format and processes by which the study’s vision was located and enacted.

Process

As already stated, the reflective practice activity took the form of a book study group. The title of the book studied was *What Every Middle School Teacher Should Know* by Knowles and Brown (2000). It should be noted that regarding the study as action research, the most important function of the book choice was the reflections and conversations that it stimulated. The book was therefore selected on the basis of format and content, as it provided a broad range of perspectives for inquiry into middle years

education. Furthermore, the writing style was easily digestible and well suited to a book study activity.

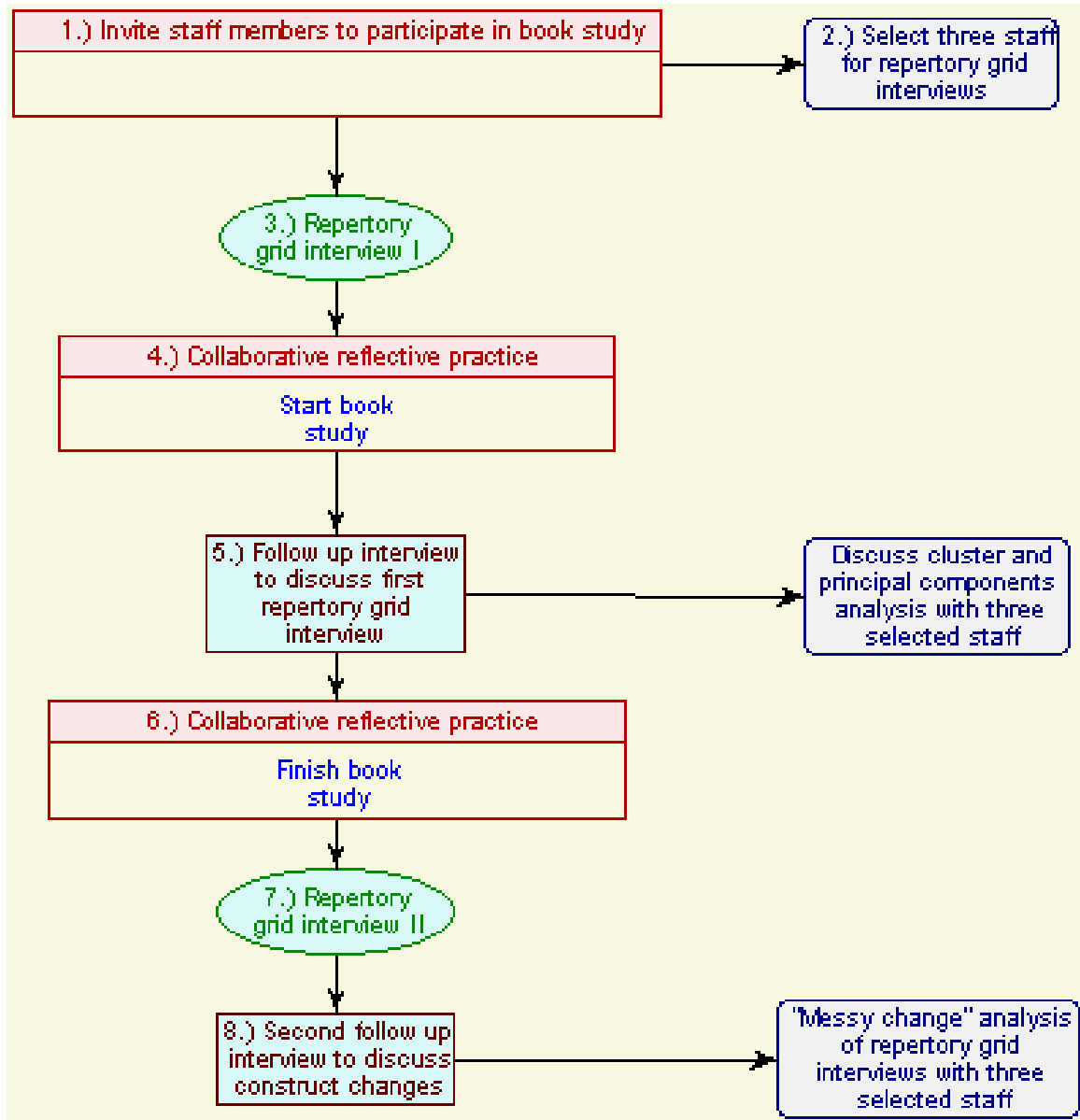


Figure 1. Methodology process diagram

In March 2007, the three selected participants took part in a pre book study repertory grid interview on the theme of how they construed good schools (see item three

in Figure 1). The book study began in April 2007 and continued for seven sessions after school until the month of June 2007 (see items four and six in Figure 1). Each session involved a discussion of our reflections on the readings for that week, and their implications for our continuing practice (both individually and collectively as a school). During the course of the study, I met with the three selected participants to conduct individual follow up interviews (see item five in Figure 1), wherein the results of each participants' repertory grid interview (cluster and principal components analysis) were shared and discussed.

Upon conclusion of the book study, the three selected participants took part in individual post book study repertory grid interviews, again on the same theme of how they construed good schools (see item seven in Figure 1). This generated a second set of cluster and principal components analyses. Comparing the two sets of constructs allowed me to compile a messy change grid analysis, which, along with the second set of cluster and principal components analyses, formed the basis for discussion in the second follow up interview (see item eight in Figure 1). The interview was used to explore the themes and processes behind each participant's constructual change and the construct change process with reference to the various cyclic models discussed in Chapter 2.

Instrumentation

As stated above, data were collected from participants in the form of repertory grid technique interviews on the topic of a good school. This choice was based on Pope and Denicolo's (2001) advice that for effective use of repertory grids "Each investigation will be on a particular topic and must be focused on an area which represents to participants an area they are able to construe" (p. 68). It was clearly reasonable to expect educators to be able to construe a good school. Perhaps more significantly, the

participants brought a full range of experience of schools as students, as teachers, as parents and as administrators. It is both these prior and current experiences that form the basis for an individual's construal of a good school.

In considering elements, the instrumentation followed the advice of Pope and Denicolo (2001) who noted "Kelly insisted that in order to be useful and meaningful, each item should be representative of an individual's life experiences" (p. 71). Further to this, elements had to "...span the range of items which are considered to be important in that area for the person or persons concerned" (Pope and Denicolo, 2001, p. 72). To this end, the elements used in the grid were *schools that the participant knows or has known*. This open ended approach permitted participants to discriminate on their own terms, the level of knowing necessary for an experience to be relevant to their construct system on this topic.

Constructs were elicited from participants using the triadic method described by Jankowicz (2004, p. 53). Individual cards with elements written on them were presented to the interviewee simultaneously. The participant was asked to identify two elements (schools they know) which were most similar and why, specifying the attribute they had in common. Next, they chose the element (school) that was most different from that attribute, and identified the contrasting pole. These two poles made up a construct. Particular attention was paid to Jankowicz's notes and observations on what constituted a good construct: "...a good construct is one which expresses your interviewee's meaning fully and precisely, and this is a matter of three things: (a) a clear contrast (b) appropriate detail (c) a clear relationship to the topic in question" (Jankowicz, 2004, p. 33).

The number of constructs elicited varied with each participant. Attention was paid in this regard to what Pope and Denicolo described as the prime prerequisite,

...that the constructs elicited cover the range of constructs which the individual feels are important to the area under consideration. Construct elicitation should continue until the individual indicates that his/her repertoire of constructs for that particular range of elements is exhausted.

(Pope & Denicolo, 2001, p. 78)

Data collection.

As mentioned earlier, repertory grid interview data was collected both pre and post activity (i.e., the book study group). Each interview lasted approximately one hour. The interview protocol, adapted from Jankowicz (2004, p. 280) is provided in Appendix A. Elements (schools you have known) were elicited from participants as noted above, followed by constructs (what ideas affect your thinking of them as good schools). As each construct was elicited, elements were rated on a scale from one to seven, with seven representing the likeness pole (i.e., what the two schools had in common as good schools) and a score of one representing the contrast pole (i.e., in what precise way did the third school differ from the first two). Use of a seven-point rating scale was consistent with the recommendations of Pope and Keen (1981, p. 47) who suggested it allowed for a finer level of discrimination than dichotomous methods of ticks and crosses suggested in Kelly's original theories. The data for each participant interview was used to produce a basic grid. An example is shown in Figure 2.

The numbers represent each school's rating on the relevant construct. For example, in Figure 2, it can be seen that Saint Michael's Junior High has very few assemblies (a rating of one, representing the contrast pole), whereas Bunny Hollow

Elementary, with a rating of seven, has regular assemblies. The question mark for Wood Green Elementary on the construct *Some staff behave unprofessionally/Staff are respectful towards one another* reflects a construct where the interviewee did not feel they had sufficient knowledge to make an informed decision.

Display Michael, Domain: Thesis Prospectus Example
Context: A Good School, 6 Schools, 10 constructs

<i>Very few assemblies</i>	1	7	5	7	2	7	<i>Regular assemblies</i>
<i>Small School</i>	4	7	7	1	4	2	<i>Large School</i>
<i>Few extra curricular activities</i>	1	7	6	4	6	2	<i>Large variety of extra curricular activities</i>
<i>Absence of student tracking systems</i>	2	4	5	5	2	5	<i>Good student tracking systems</i>
<i>Students are rude and disrespectful</i>	1	6	4	6	3	6	<i>Students are polite and considerate</i>
<i>Academic performance is not emphasized</i>	1	7	6	4	3	4	<i>High academic standards are set and maintained</i>
<i>Does not use a house system</i>	1	7	1	1	1	7	<i>Uses a house system</i>
<i>Lacks parental involvement</i>	1	6	4	7	2	7	<i>Has strong parental support</i>
<i>Students are disaffected</i>	2	6	7	6	5	6	<i>Students identify strongly with the school</i>
<i>Some staff behave unprofessionally</i>	1	6	6	6	5	?	<i>Staff are respectful towards one another</i>
							Wood Green Elementary
							Colonel Bogey School
							Bunny Hollow Elementary
							Wood Green Comprehensive
							Soilyhill School
							St. Michael's JH

Figure 2. Repertory grid example

In an effort to address the limitation of my lack of experience with repertory grid technique, self-tutoring exercises in Jankowicz's (2004) *The Easy Guide to Repertory Grids* were completed prior to the study. Additionally, repertory grid interviews, together with the attendant methodologies such as eyeball, cluster and principal components analysis, described in Jankowicz (2004), were administered as a self-study, and also as a practice activity on a colleague who teaches middle years students at a

school other than the researcher's. The statistical techniques of cluster and principal components analysis are described in further detail below.

Other data were gathered in the form of a personal research journal. The purpose of this document was to create a formal record of the researcher's thoughts, particularly with regard to elements of the research that were not recorded and transcribed (such as process and eyeball analysis following repertory grid interviews).

Data Analysis

As noted in the previous section on limitations and methodological considerations, the imperative for authenticity implied a need for the research to take an iterative and interactive stance, with a range of techniques being used to make successive approximations. To fulfill this requirement, data analysis was completed using a variety of methods over the course of the study, several of which were shared with participants as part of the research design.

Process analysis was recorded in a personal research journal. Jankowicz (2004) noted "The process by which the information is obtained is informative in itself, and understanding this will provide you with background for the other analyses you'll be doing" (p. 77). Eyeball analysis was also recorded in a research journal. As described by Jankowicz (2004, pp. 81 –83), this involved describing and analyzing patterns that were immediately apparent from looking at the raw data. He noted the particular importance of eyeball analysis when working collaboratively with interviewees (as was the case in this study), as ideas from eyeball analysis form the basis of the initial interpretation from which common understandings are negotiated. The analysis was adapted from Jankowicz (2004, pp. 78 – 80) and included describing initial impressions of what the interviewee was thinking about and how the interviewee chose to represent the topic. Consideration

was given to how the interviewees developed their constructs, whether they chose to qualify any of their statements and the distinctions that were made between the poles of constructs. In looking at elements, the eyeball analysis involved describing how the interviewee thought regarding elements, considering the implications of missing element ratings and observing the degree and nature of ratings' differentiation (such as polarization or unusually wide or narrow spread of scores). An attempt was then made to synthesize the supplied elements, constructs and ratings into a description of how the interviewee characterized a good school. Main conclusions and interpretations from this analysis, along with the aforementioned process issues, formed a starting framework for discussion with participants in the first and second follow up interviews (see items five and eight in Figure 1).

Adding a further iterative dimension, cluster analysis was done for each repertory grid interview. As a standard tool in repertory grid technique, Jankowicz (2004, p. 118) described it as a statistical technique that can be used to visually emphasize relationships in a repertory grid. Put in simple terms, the analysis involved calculating percentage similarity scores between, first, the elements and then the constructs from the repertory grid interviews. Elements and constructs with the most similar ratings were then clustered side by side, together with *dendrograms* (a form of graphical representation) to show the percentage similarity scores for adjacent constructs and elements. An in depth examination of the calculations involved in cluster analysis can be found in Jankowicz, (2004, pp. 118 - 125). In the interests of expediency however, he noted the tendency for most researchers to access one of the commonly available software programs. In the case

of my study, the cluster analysis was generated using the RepGrid IV software application (Gaines & Shaw, 2005). An example is shown in Figure 3.

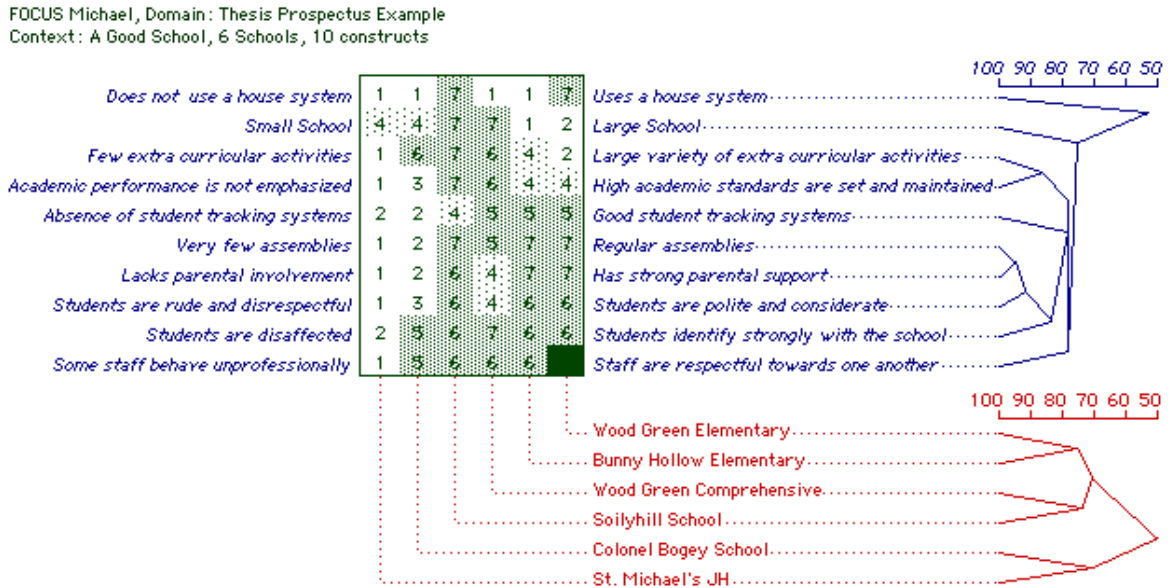


Figure 3. Sample of repertory grid interview cluster analysis

As can be seen, in comparison to Figure 2, both elements and constructs have been repositioned in the chart to reflect their degree of similarity. Adjacent elements and adjacent constructs are more similar than ones with greater proximal separation. The degree to which this relationship exists can be objectively compared using the dendrograms on the right of the chart. By observing the point at which lines from elements meet each other, it is possible to extrapolate the percentage ‘match’ between scores of both adjacent elements, and sets of adjacent elements. Extending a vertical line up from the two lines’ meeting point to the incremental percentage scale marked from

100 to 50 gives a percentage reading. Using the Figure 3 example, Wood Green Elementary and Bunny Hollow schools are approximately 75 percent similar for the interviewee, within the context of what makes a good school. Further to this, these two schools, together with Wood Green Comprehensive and Soilyhill School collectively share an approximately 70 percent degree of similarity. Using an example from the constructs' dendrograms, schools that were rated as having strong parental support and polite and considerate students shared a 95 percent degree of similarity, suggesting that the two constructs may be connected in some way. The possible existence and nature of this connection would form the basis for a line of investigation in the subsequent follow up interview (item five in Figure 1).

Interpretation of the cluster analysis was carried out using a procedure adapted from an outline by Jankowicz (2004, p. 284). This involved a number of steps. Firstly, the elements were examined with notice being paid to how elements had been reordered. The shape of the element dendrogram was reviewed for possible insights into similarities and differences between schools. Looking at constructs, similarities and differences were noted and reviewed for implications they might have for the way in which the participant was thinking. The highest percentage similarity score was noted and remaining scores examined for possible links and connections. Constructs were inspected for how they had been reordered by the cluster analysis, and for the shape of the construct dendrogram. These observations were then applied back to the elements (schools) to identify any similarities and differences that had been revealed. Conclusions and interpretations from cluster analysis were discussed with participants in the first and second follow up

interviews both to check their authenticity and as a form of collaborative reflective practice/feedback (see items five and eight in Figure 1).

The principal components analysis was a further statistical technique applied to the data from the repertory grid interviews. Jankowicz (2004, p. 128) discussed its function as being to identify and graphically represent the main or principal patterns of variance in the data. The analysis method was particularly well suited to an action research methodology, as it involved a statistically iterative process of accounting for all the patterns of variance within the repertory grid interview. The principal components analysis was generated using the RepGrid IV software application (Gaines & Shaw, 2005). In simple terms, Jankowicz (2004, p. 128) described it as a technique that successively calculated the extent to which the ratings in each row of a repertory grid varied from each other. The variance is calculated for all possible paired comparisons between rows of scores. The pattern that accounts for the greatest variance is identified as the first principal component and then removed from subsequent calculations. The process is reiterated with the remaining data to determine which pattern now accounts for the greatest variance. This is identified as the second principal component. Subsequent iterations are completed using the same process noted above, until all variance has been attributed to specific components. The first and second principal components are then used as X and Y axes on a graph. The axes are an abstraction that depicts the statistical components responsible for the greatest (X-axis), and second greatest (Y-axis) amounts of variance in the data. As Jankowicz (2004) suggested, axes are “set at right angles to each other, because they represent maximally distinct patterns in the data ... each

component is a statistical invention, whose purpose is to represent one of the different patterns in the grid” (p.129). An example is shown in Figure 4 below.

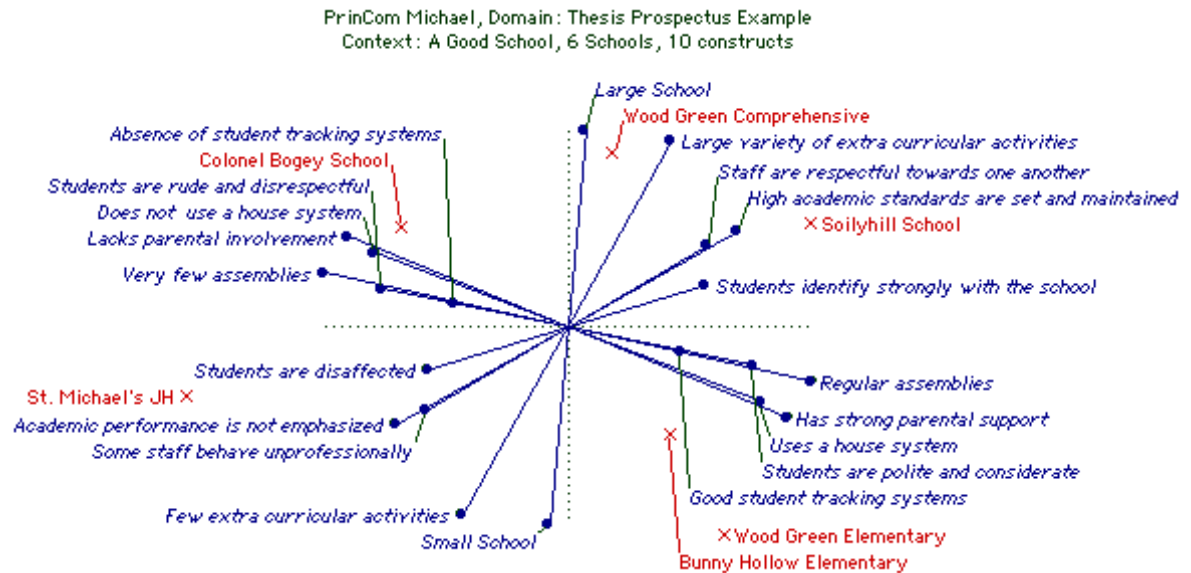


Figure 4. Sample of repertory grid interview principal components analysis

As can be seen, constructs from the grid have been plotted as straight lines. The length of these lines relates to the range of scores assigned to elements. With reference to cluster analysis scores from Figure 3 it can be seen that the line for the construct *small school/large school*, with scores ranging from one to seven, is correspondingly longer than the construct *absence of student tracking systems/good student tracking systems*, which only has scores ranging from two to five. The angle of the line with regard to the horizontal and vertical axes represents the extent to which the construct is represented by the pattern component (Jankowicz, 2004, p. 129). Observing Figure 4, the viewer can intuitively grasp that the interviewee sees regular assemblies, strong parental support, using a house system and having good student tracking as being fundamental to being a good school. Furthermore, the proximity of Wood Green Elementary and Bunny Hollow

Elementary in relation to this sheaf of constructs suggests that, at least in regard to these constructs, the two elements represented a good school far better than, say, Colonel Bogey School.

The second sheaf of constructs is clearly more dispersed than the first. The two constructs, *large school/small school* and *large variety of extra curricular activities/few extra curricular activities* are comparatively close to the Y-axis (or second principal component of variance). On an intuitive level, the possibility that the two ideas might be linked is a clear one. The other three constructs, *students identify strongly with school/students are disaffected*, *high academic standards are set and maintained/academic performance is not emphasized* and *staff are respectful towards one another/some staff behave unprofessionally* are in reality closer to the X-axis than the Y-axis. This does not specifically imply a greater link to the constructs close to the first component, but does provide an opportunity for further discussion as to the links and causalities that might exist within the interviewee's systems of construal.

Jankowicz (2004, p.134) suggested that to be accurately representative, the two components should ideally account for at least 80 per cent of total variance. A failure to adhere to this suggestion does not invalidate the data shown on the first two components, but indicates that not all of the patterns that might be present are revealing themselves in the initial plot. To rectify this, a percentage of less than 80 per cent might require one to determine further components of variability until this 80 per cent requirement is met. By then plotting components against all possible others (i.e., first versus second, first versus third, second versus third in the event of three components), other subtle connections between data might emerge. For the purposes of this study as an action research project

on collaborative reflective practice, the approach was noted, but not deemed necessary on the grounds of parsimony not being well served by this level of detail.

When examining the role of the principal components analysis within the overall methodology, it is useful to view it as merely a possible graph of the main themes and their relationship to each other. It is important to note that some of the patterns of variance could be completely coincidental, and as such, must be explored in a follow up interview with the subject in order to maintain validity in terms of their ontological and educative authenticity. Like much of repertory grid technique, the real advantage of principal components analysis lies in the graph's potential to allow participants and the researcher to elicit themes of construal that were not otherwise immediately apparent. This factor accounted for the incorporation of the principal components analysis into the follow up interview (item five in Figure 1).

The principal components analyses were completed with interviewees using a procedure adapted from Jankowicz (2004, pp. 134 -137). This involved examining the slopes and lengths of the lines representing the constructs. Attention was paid to alignment relative to the X and Y axes as explained above, and to other constructs. Similarities in the meanings and relationships of the constructs that made up each sheaf were discussed and explored further to develop interpretations.

The cluster and principal components analyses formed the basis for the first feedback interviews with individual participants (item five in Figure 1). Once the book study was completed, a second repertory grid interview was conducted with each subject, using the techniques described previously and the same context of *A Good School* (see item seven in Figure 1). Cluster and principal components analyses were again generated

using the RepGrid IV software program (Gaines & Shaw, 2005). By comparing the first and second repertory grid interviews, changes in constructual themes were observed, and reasons and processes explored with participants in the final follow up interview (see item 8 in Figure 1). This process made use of *messy change grid analysis* as its main technique. Jankowicz (2004, pp. 214-221) suggested that such a process was useful for situations where elements or constructs change over time. While the elements in the proposed study (*schools that you knew*) might be expected to remain comparatively stable, it was reasonable to expect a likelihood of constructs changing. Messy change grid analysis details a set of procedures by which these complicated construals were systematically assessed. The basic steps used for the messy change grid analysis were adapted from the procedures outlined by Jankowicz (2004, pp. 214-221). Having conducted the two repertory grids on the same theme as outlined above, the charts were placed one below the other on a table framework with elements ordered similarly to each other. As elements (*schools they knew*) remained generally consistent from interview to interview, constructs were examined. To ease interpretation, constructs and scores were colour coded to enable one to see the interview source at a glance. Those constructs judged to express similar ideas (albeit with sometimes different wording) were then placed together on the framework (see Figure 5). Ratings assigned to the schools for the similar constructs, and the mathematical difference between them, were noted using the same colour-coding scheme, (in Figures 5 and 6, black text refers to the first repertory grid interview, blue text to the second repertory grid interview, and red text to the difference scores). Remaining constructs that were unique to the first or second interviews were listed afterwards separately, using the same format and colour coding

system (see Figure 6). The working grid sheet was then used as the starting point for discussion in the second follow up interview (see item eight, Figure 1), with supplementary reference being made to the cluster and principal components analyses as needed. During the interview, the subject was questioned as to the ontological authenticity of how I had grouped the constructs in the working sheet. The function and meaning of both new and omitted constructs were discussed and in cases where elements had changed for some reason, explanations were sought. Close attention was paid to the differences and sum of differences score (see red numbers in Figure 5), as larger numbers reflected possible shifts in how the interviewee felt about certain schools. Reasons for why these ratings changed were discussed to provide insight into how reflecting on elements caused constructs to change. The process by which the collaborative reflective practice had caused constructs to be dropped or adopted was explored in depth to determine how patterns of thinking had changed and why. These discussions encompassed both the book study and the various interviews described here, in an attempt to determine insights into the links between specific aspects of collaborative reflective practice and construct change.

Through discussion, an attempt was made to place the individual's construct changes within an organizational framework based on established models in personal construct theory. These models are described in Jankowicz (2004, pp. 216-221) as the creativity cycle, experience cycle, and circumspection/pre-emption/control (CPC) cycle. These cycles will be addressed further in Chapter Five.

Joe Teacher		R	J H.S.	RS El.	W El.	B. Coll.	G.V.	B J.H.	SV J.H.	C J.H.	X. Coll.	Y J.H.	Z El.	
Grid/Construct A1.1 and A2.1	School is separate from rest of life experience/ Knowledge of student is specific to school context	2,4,2	5,4,1	7,4,3	1,1,0	2,5,3	4,5,1	4,3,1	4,3,1	3	6,7,1	5,3,2	7,7,0	A valuing of the whole person/ Staff are aware of students as individuals
A1.2 and A2.5	Rigid adherence to policy and programming/ One size fits all programming	4,5,1	5,4,1	3,4,1	1,1,0	2,1,1	5,5,0	1,3,2	2,3,1	6	5,6,1	5,3,2	5,3,2	Attention is paid to meeting the diverse needs of students/ Programming is differentiated to meet student needs
A1.3 and A2.4	Inconsistent commitment to creating and maintaining a purposeful learning environment/ Academics are secondary to other concerns	6,7,1	6,6,0	6,6,0	3,4,1	3,7,4	2,5,3	5,5,0	4,4,0	3	6,6,0	6,4,2	6,6,0	An intentionally studious and orderly environment/ An atmosphere exists of academic purposefulness
A1.4 and A2.9	Unclear priorities/ School as a rudderless ship	6,5,1	6,4,2	6,5,1	2,4,2	3,3,0	5,4,1	4,3,1	4,2,2	6	6,7,1	5,2,3	7,7,0	A clearly defined sense of direction/ Leadership and direction are evident in the school
Sum of Differences		5	4	5	3	8	5	4	4	n/a	3	9	2	

Figure 5. Example of single working grid sheet to summarise changes between interviewee's two grids (part 1)

Joe Teacher

Grid/Construct	R		B.		B		SV	C	X.	Y	Z			
	H.S.	J H.S.	RS EI.	W EI.	Coll.	G.V.	J.H.	J.H.	J.H.	Coll.	J.H.		EI.	
A1.6	Staff do not behave as professionals	3	6	6	3	3	3	5	4	5	6	5	6	Staff respect each others professional roles and opinions (emotionally safe environment)
A1.7	Parents feel unwelcome in school	3	4	6	n/a	n/a	5	3	3	6	6	5	6	Opportunities for meaningful parental involvement
A2.2	Student is a number	4	5	5	1	2	4	4	5	n/a	7	4	7	Staff make students feel valued and appreciated
A2.3	Limited variety of curricular/extra-curricular opportunities are available	6	3	5	5	5	4	5	6	n/a	6	3	4	Students have the opportunity to participate in activities that are meaningful to them
A2.6	Lack of a caring community leads to anxiety	3	4	4	2	5	5	4	3	n/a	6	3	7	Sense of community exists that leads to a feeling of security
A2.7	Teaching is tied to the text	7	3	3	4	6	5	3	3	n/a	5	2	2	Teachers focus on big ideas and allow student input into the curriculum
A2.8	Focus on content rather than process	6	3	4	2	4	5	3	3	n/a	6	2	6	Develops habits of mind and independent learning behaviours

Figure 6. Example of single working grid sheet to summarise changes between interviewee’s two grids (part 2)

As can be seen from the structure outlined in this chapter, the study incorporated four interviews with each participant. The first and third of these involved pre and post book study repertory grid interviews, while the second and fourth follow-up interviews were a discussion of each participant's construct system, with reference to a variety of instruments derived from repertory grid technique. These two follow-up interviews were tape recorded and transcribed for subsequent analysis. This step provided for significant levels of verbatim evidence for subsequent interpretations, which was important in addressing credibility concerns.

The difficulties of representing not only someone's construct system, but how it has changed over time, were addressed by developing concept maps of their construct system as they related to good schools. According to Gaines and Shaw (2005, p. 8), theories and applications of construct representation techniques are well established. They include diverse forms such as concept maps, influence diagrams, causal maps, belief nets and semantic networks. Gaines and Shaw (2005) went on to state "Nets and grids are complementary constructivist techniques, and may be used together to help people to explore their ideas about a topic, make them more explicit and discuss them with others" (p. 8). To this end, two summative concept maps (a form of net) were developed from the results for each interviewee. An example is shown in Figure 7.

The maps were an attempt to visually represent the construct system of the participants after each follow-up interview (items five and eight in Figure 1). In addition, the concept maps built on themes already highlighted in the eyeball, cluster and principal components analyses for each interviewee. The method used was an adaptation of that described by Novak (1998, pp. 227-228). The domain or focus question was of *the good*

school. Concepts mapped were the bipolar constructs elicited through the repertory grid interview. Whilst unusual, this was consistent with construct psychology principles that suggest reality is constructed from dichotomous contrasts rather than absolutes.

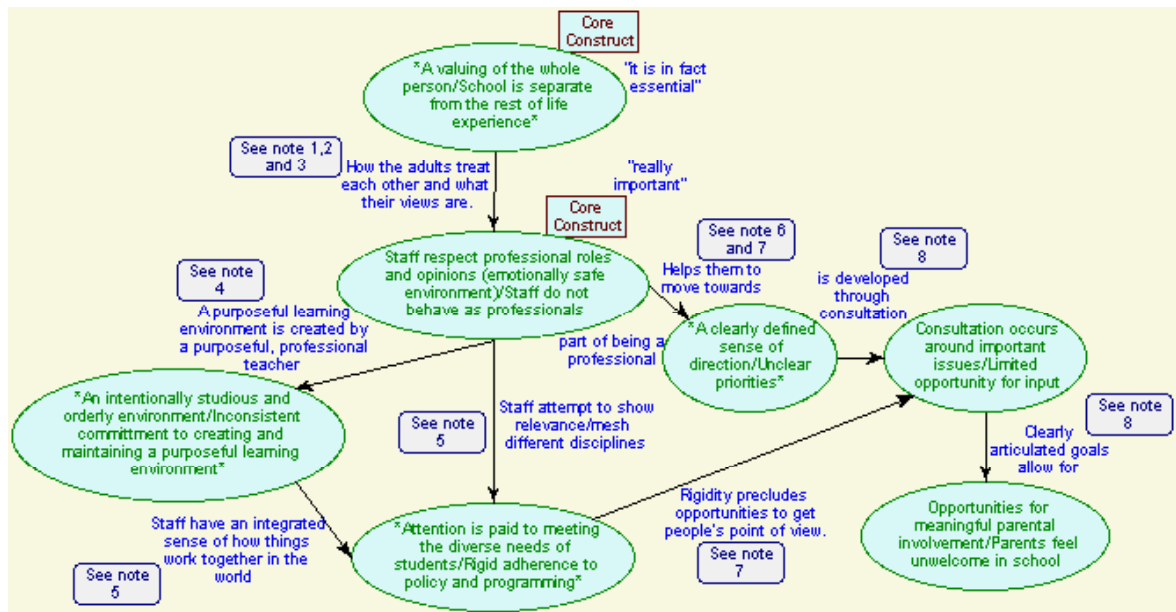


Figure 7. Example of a concept map

Constructs identified by the interviewee as most essential or important were labeled as core constructs. Process analysis notes and transcripts from follow up interviews were scanned for supporting evidence relating to how constructs interrelated. Paraphrased links between constructs were then added (see blue text in Figure 7). The supporting evidence from the transcribed follow up interviews is presented in appendices. Notes were added to the concept map to direct the reader to the relevant passages in the appendices, where source text is highlighted. In reading the concept maps, it is important to note that the paraphrased links referred to above can connect the constructs through their likeness poles, their contrast poles or through a combination of both. For example,

in Figure 7, note seven identifies a link between the contrast pole of one construct (*Rigid adherence to policy and programming*) and the likeness pole of another (*Consultation occurs around important issues*). Again, this makes sense when viewed in terms of reality being constructed through use of dichotomous contrasts.

The development of the concept maps was an attempt to represent a large volume of information about the subject's thinking in a parsimonious and easily understandable form. In many regards, their construction functioned as a metaphorical reflecting pool for me. Comparison of the first and second interview maps facilitated analysis of the changes that had occurred during the course of the study. The nature and processes of these changes will be discussed further in Chapter Five.

Chapter 4: Results

As stated in Chapter One, the purpose of this study was to examine how participation in collaborative reflective practice affected teachers' psychological constructs within the context of what they believed constitutes *a good school*. In the interests of fulfilling validity criteria as outlined earlier, large quantities of data were generated in a variety of formats. As each teacher taking part constituted a case study in his/her own right, data and analyses are presented in chronological order of collection by participant. The results take the form of cluster and principal components analyses for each repertory grid interview (presented as figures) with attendant notes and observations. The results were then synthesized into a concept map with supporting transcript excerpts (in appendices L – Q). Original raw data from repertory grid interviews is provided for reference purposes (in appendices F - K).

John Reimer

Introduction

John Reimer teaches middle years English Language Arts, Social Studies, and an ever-changing variety of other subject areas and courses that require someone to tackle them in any given year. His educational background was at private, religiously affiliated secondary schools, one of which he boarded at for a short time. His current six year teaching stint at High Cross was preceded by three years teaching English in Mexico, a previous two year posting at High Cross, term positions at two high schools and two other junior high schools in the division, and two years teaching English in Japan. He involves himself in extra curricular coaching activities as well as supervisory tasks such

as school dances. He is well known on staff for his ready wit and quick quips, and can always be relied upon for an independent opinion. With regards to the study, it should be noted that due to a variety of unanticipated coaching and refereeing commitments, he was only able to attend one reading group discussion session. For John, the collaborative reflective practice process was limited to reading the book and reflecting upon it within the context of the repertory grid sessions and follow up interviews. The results, as we shall see, were no less valid within the action research paradigm. Furthermore, it provided useful insight into the challenges of organizing collaborative reflective practice within a busy school setting, and the inherent value of persisting despite logistical challenges.

Process analysis I

John was engaged by the grid topic and process. Element choices dealt with schools that he had attended for his own secondary education, and those he had taught at in Canada. No reference was made to his foreign teaching experiences. After the first couple of attempts, John had little trouble developing a wide range of constructs using the eliciting process. More difficult for him was the process of scoring the constructs afterwards. His resistance centred on a perceived need to be seen to be pursuing an objective truth. He expressed on several occasions during the scoring that he felt there were many potential variables that he might not be aware of, all of which might be, to his mind, skewing or invalidating the data. Nonetheless, he was able to complete the task and the interview proceeded in a smooth and effective manner.

Cluster analysis I

The interviewee had agreed to discuss his ideas about what constitutes or characterizes a good school. The elements used were schools that John felt he knew well enough to have a valid opinion on. This distinction was left to his discretion, leading him to choose schools he had attended in his secondary level years and those in which he had taught in Canada. The predominant theme for John during his first interview was very clear, and can be seen within the cluster analysis (see Figure 8 below). Looking at the construct *Has the ability to select student population/No freedom to control admissions of students* it can be seen that the scores on this construct were very polarized, consisting largely of ones or sevens. In terms of repertory grid theory, the construct would be described as *constellatory*, as it allowed an observer to imply the position of elements on other constructs quite strongly; generally speaking, it can be seen that schools that are able to select or control admissions (i.e., private schools) are rated higher on most constructs.

There are some important aspects of this analysis that require further explanation. Examining the role of the first two of these constructs (*Intimate sense of community [small school]/Less sense of community [big school]* and *Staff enjoy each others' company [strong cohesion and collegiality]/Fractured staff*), comparison with the original repertory grid (see Appendix F) reveals that the cluster analysis has reversed both the order of the constructs and the scores for the elements. In each case, the construct pole that began on the right hand side in the repertory grid interview is now on the left in the cluster analysis (Figure 8). The RepGrid IV software program (Gaines & Shaw, 2005) performs this construct and score reversal function as a further statistical analysis in its search for greatest patterns of similarity within the data. Patterns of

similarity are thus revealed that might otherwise be missed. Jankowicz (2004, p. 108) explained the rationale for this procedure: The role of the cluster analysis is to calculate the percentage similarity scores between elements and between constructs. Since the constructs are bipolar and are scored from one to seven, the same intended meaning is expressed by reversing the polarity of the constructs, as long as the scores are similarly reversed (i.e., one becomes seven, two becomes six, and so on).

In John's case, the patterns revealed by the construct and score reversal noted above might reasonably imply that he sees smaller schools as having higher levels of staff collegiality and cohesion, and larger schools as more likely to have fractured staff groupings. Other implications were also apparent; for example, staff may have greater collegiality when they have common values. Is student selection a positive feature because it allows limits on the size of the school, or does it contribute more by selecting students (and families) who share certain values to begin with? A variety of these implications were explored further in the follow-up interviews, with findings presented in the concept map (see Figure 10 below).

The third construct on the cluster analysis (see Figure 8) shows a further interesting pattern. The construct *Diversity of student population exposes students to different ideas and values/Monocultural population does not challenge students' preferred ways of thinking* is significant. Unlike the first two constructs discussed above, the construct and scores have not been reversed. This represents a contradictory construct that is at odds with much of the rest of his thinking on a good school. For John, selection of students facilitates development of an important sense of community derived from the inculcation of a common set of cultural/religious values. Principal amongst these is

strong parental emphasis on academic achievement, which contributes to a tradition of consistent standout programming. Clearly, however, an important value that he holds relates to the need for education to challenge an individual’s existing patterns of thinking. A large part of this comes from the school containing and supporting a diverse range of ideas, values and cultures (which was, at least in the private schools he had attended, a feature that was mutually exclusive in regards to the selection policies).

Other notable features include the marked similarity of the scores for the private schools. The element dendrogram suggests a level of approximately 95 per cent similarity between Irvine High School, Kensington and Northwinds High School. By comparison, John’s current school compared to the private schools is only approximately 70 per cent similar, and is very much an outlier to both the private schools and a second cluster of schools that are approximately 85 to 90 per cent similar to each other.

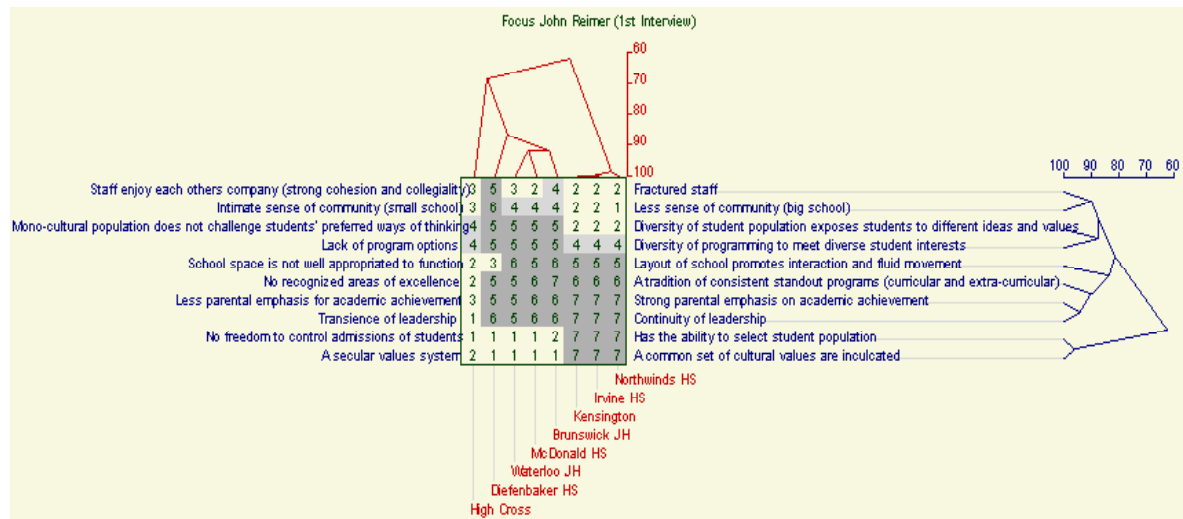


Figure 8. John Reimer (first interview) cluster analysis

Principal components analysis I

Observing Figure 9 below, it can be seen from the labels on the X and Y axes that the two components generated account for almost 94 per cent of the total variance in the

data. Jankowicz (2004, p. 134) suggests that to be accurately representative, the two components should ideally account for at least 80 per cent of total variance. In Figure 9, two distinct *sheaves* of constructs were present. The more horizontal *sheaf*, loosely aligned with the X-axis (and hence the first, larger component) dealt with issues of values, diversity, admissions policy and staff collegiality and cohesion. The more vertical sheaf of constructs dealt with academic concerns and expectations, and some of the practical concerns that can influence them (leadership continuity and school facilities). Examination of the plotting of the elements reinforced the point already made in the cluster analysis. A cluster of private schools (Irvine High School, Northwinds High School and Kensington) aligned themselves clearly at one end of the X-axis components, with another cluster at the opposite end. John’s current school found itself plotted as a notable outlier within one end of the Y-axis sheaf. Looking at the poles of the constructs within which it was plotted, it was clear that John was not viewing his current school in a favourable light within the context of a good school.

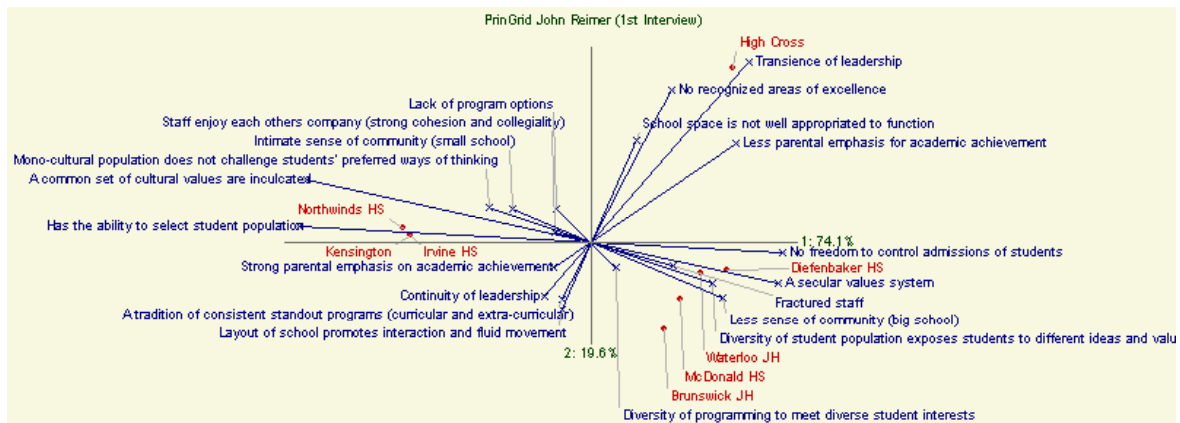


Figure 9. John Reimer (first interview) principal components analysis

In order to synthesize large numbers of complex interrelated concepts, conclusions from John’s first interview were then represented in the form of a concept map (see Figure 10 below). The map was developed from the repertory grid interviews and from analysis of the transcript of the follow-up interview, where the repertory grid results shown above were presented and discussed. As detailed in Chapter Three, references to notes on the concept map may be found in Appendix L and provide supporting evidence for the map structure. Arrows on the map characterize the hierarchical relationship between constructs.

The concept map illustrates a number of key aspects alluded to earlier. The most important of these was the central dissonance between a selective admissions policy (and how it facilitated common values and high levels of parental support) and its role in negating important functions of diversity within student learning. As can be seen, the two constructs on the right hand side are clearly set apart from the other constructs, with far fewer linkages to other constructs.

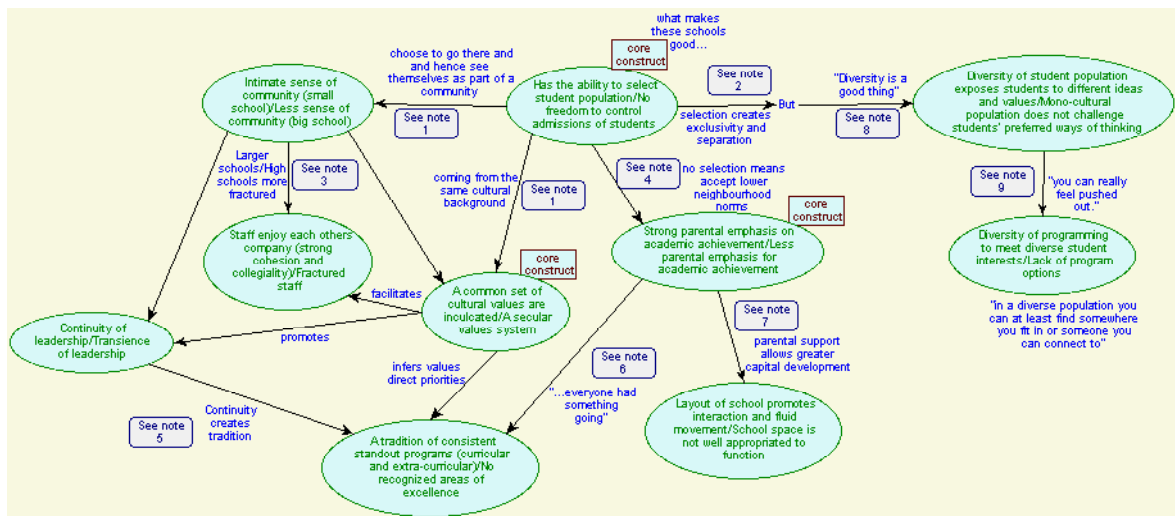


Figure 10. John Reimer (first interview) concept map

Process analysis II

For the second repertory grid interview, John maintained the same choice of eight elements as for the first interview. No reference was made to schools that he had taught at overseas, nor to elementary schools he had attended in his youth. Once again, discomfort was noted regarding John having to place a number value on where schools lay on any given construct. He made several comments regarding his concerns over objectivity and not being able to account for the many possible variables that he might not be aware of. Aside from this concern, the interview proceeded smoothly.

Cluster analysis II

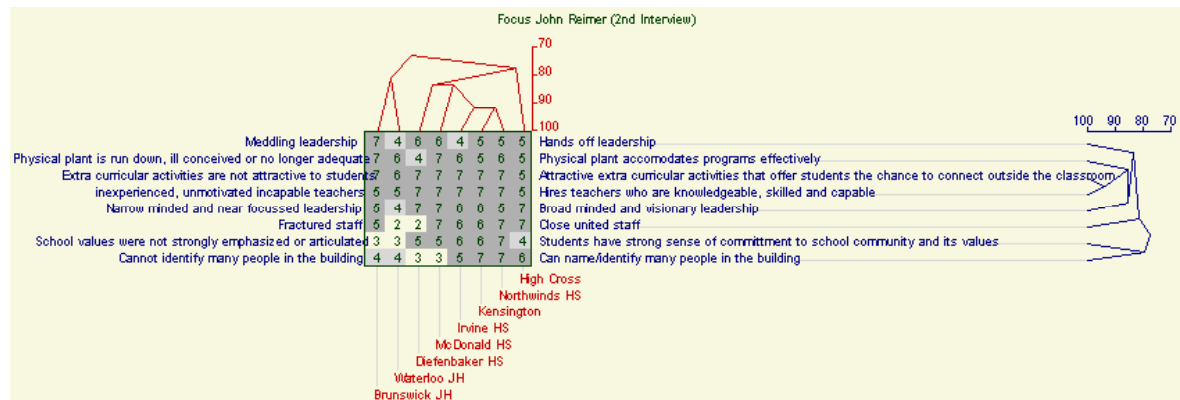


Figure 11. John Reimer (second interview) cluster analysis

In Figure 11 it can be seen that the second repertory grid interview elicited eight constructs. Two of the constructs dealt with dimensions of leadership (*Hands off leadership/Meddling leadership* and *Broad minded and visionary leadership/Narrow minded and near focused leadership*), three with themes of community (*Can*

name/identify people in the building/ Cannot identify many people in the building, Close united staff/ Fractured staff, Students have a strong sense of commitment to school community and its values/ School values were not strongly emphasized or articulated) and one each dealt with plant and facilities, extra curricular activities and staffing. Compared to the first interview, the constructs were statistically more similar to each other. None of the constructs were reversed in this cluster analysis.

Regarding elements, two main clusters were present; Brunswick and Waterloo Junior High on the one hand had a number of notably lower scores, while Diefenbaker High School, McDonald High School, Irvine High School, Kensington and Northwinds High School tended to have higher scores in comparison. Within this latter group, Irvine High School, Kensington and Northwinds High School were a clearly more closely aligned subgroup, with over 90 percent similarity in their scores. While High Cross (John's current school) again appeared as an outlier, its position on the right hand side of the cluster analysis was a clear indication that overall it was being framed in a more positive light within the context of *a good school*. Notably, it was about 78 per cent similar in its ratings to the Northwinds High School, Kensington, Irvine High School, McDonald High School, Diefenbaker High School cluster. This is a marked change from the approximately 62 per cent level of similarity with the Northwinds High School, Kensington, Irvine High School cluster in the first interview. A further point worth noting is the generally higher scores in the second interview. This could be indicative of a desirability effect, or possibly of a more positive outlook or frame of mind.

Principal components analysis II

Looking at the X and Y axes, the principal components analysis in Figure 12 indicates that the first two components calculated (47.6 percent and 19.1 percent) account for almost 67 per cent of the variance (compared to almost 94 per cent in the first interview).

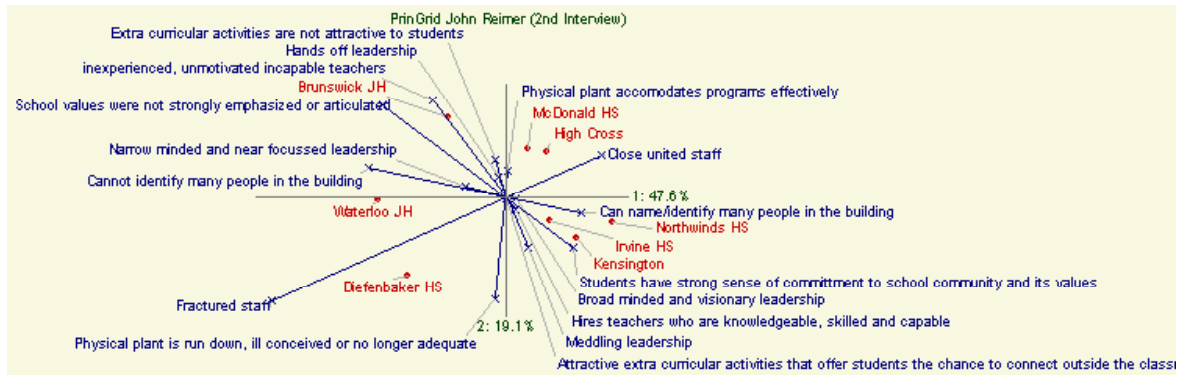


Figure 12. John Reimer (second interview) principal components analysis

This indicates that John’s thinking on what makes a good school has more dimensions (or *components*) than it did previously, when much of his construing was constellatory to the construct *Has the ability to select student population/No freedom to control admissions of students*. This is similarly reflected in the plotting of the constructs, where sheaves that were readily apparent in interview one are less obvious and more widely spread. Figure 12 shows constructs form one widely spaced sheaf of seven, which is then crossed almost perpendicularly by the single construct, *Close united staff/ Fractured staff*.

The placement of elements (schools) upon the plot shows the three selective schools (Irvine High School, Kensington, Northwinds High School) again are tightly grouped towards the likeness poles of the construct sheaf (i.e., the poles that say what

good schools have in common). At the opposite side of the construct sheaf, Brunswick is shown as an outlier at the contrast poles (i.e., the poles that say what the corollary dimensions of a good schools are). In between these two groups, High Cross and McDonald High School occupy an intermediate position, with a more closely united staff, while Waterloo Junior High and Diefenbaker High School occupy a similar intermediate position, but with a fractured staff.

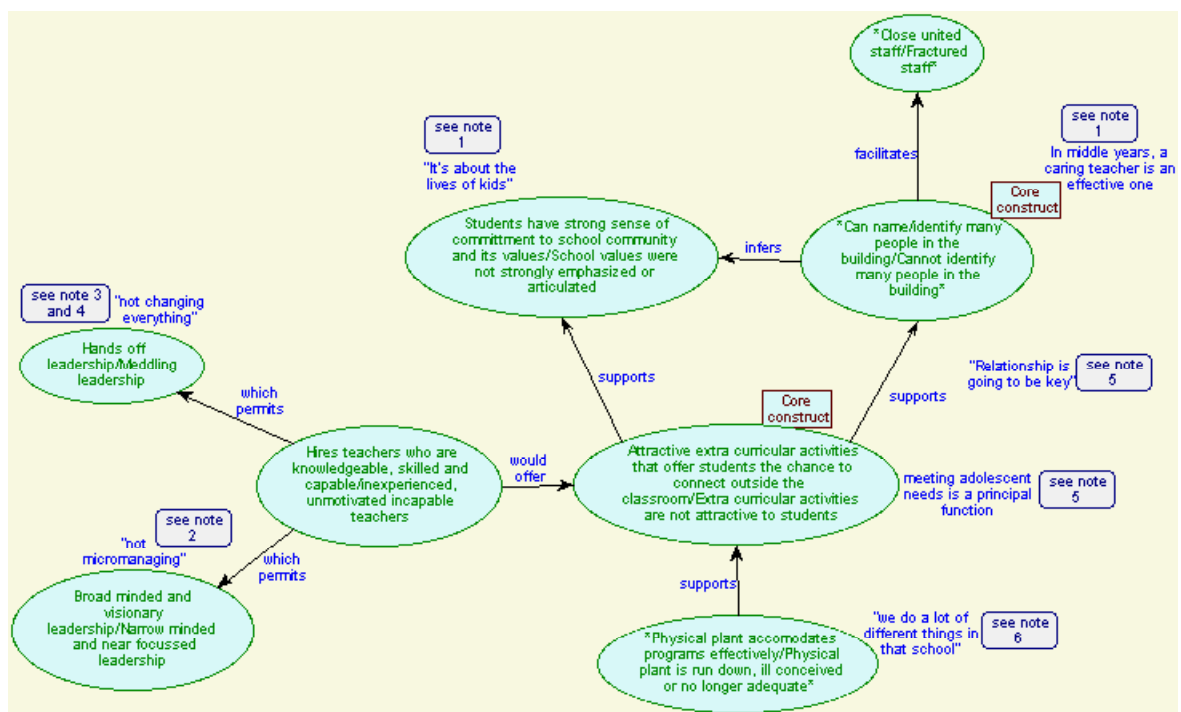


Figure 13. John Reimer (second interview) concept map

Figure 13 synthesizes the cluster and principal components analysis into a concept map to represent John's thinking after the second interview. Notes refer to Appendix M where supporting documentation from the interview transcripts is presented as discussed in Chapter Three. His core constructs for what constitutes a good school now relate to

themes of meeting adolescent needs for belonging, and to the direct link between teacher effectiveness and caring. A secondary theme that becomes more apparent in the concept map is that of teacher autonomy and competence. John believes that in a good school, a principal hires knowledgeable, skilled and capable teachers and then allows them considerable autonomy to do their job. Another area where the interview revealed a broadening of a construct regarded the core functions of the school plant and facilities. If a good [middle] school is focused on meeting adolescent needs as a main function, then its ability to accommodate a wide variety of programs, both during school hours and outside of them, becomes important. John made the comment in Figure 13 regarding note six; “we do a lot of different things in that school”. When viewed in relation to High Cross moving from a score of two to a five on constructs related to facilities generated in the first and second interviews, this suggests a tacit acceptance that the role of a good school has moved beyond a purely academic focus, to the point of accepting the need for an effective [middle] school to be more developmentally responsive.

Anne Jacobs

Introduction

Anne Jacobs is a resource teacher at High Cross School. She grew up in rural Manitoba as the eldest of eight children. As the daughter of a father in rural medical practice, and a mother who was a school trustee, many of her early school memories revolved around close friendships that existed between her parents and teachers and principals in the community. Her junior high and high school years found her in the academic streams at her schools, surrounded by a close and supportive group of friends. Upon graduation from Grade 12, she entered her local university to study music, before

switching both subject and institution to pursue a degree in English literature at the larger Newchester University. Following her degree, she completed a certification year in Education, which included teaching practice blocks at Perryman School in Winnipeg and at her high school alma mater in rural Manitoba, Westshire High School.

Her first teaching appointment was in Winnipeg teaching language arts, history and music at White Hart Lane Junior High, where she remained for four years before transferring to a similar appointment at Chivers Junior High. During this time, she continued to take courses at Newchester University on a part-time basis and completed her Special Education Certificate. While taking time away from teaching to raise her son and two daughters, she continued taking courses at Newchester University, eventually graduating with her M.Ed. During this time she also taught in the Faculty of Education on a sessional basis at graduate and undergraduate levels.

As her children reached school age, she returned to teaching, working part-time at High Cross School as a resource teacher. Subsequently becoming employed full time at the school, she has remained there ever since. As one of the longest serving teachers at the school, her wealth of experience within the community during this time is a valuable asset. She is active within the professional network of resource teachers, organizing and running regular training sessions and workshops.

Process analysis I

Anne was very engaged by the grid topic and process. There were no major comprehension issues. The subject's element choices regarding *Schools I know* was very broad and inclusive, ranging from her own schools through those of her children, and on to both schools where she taught and universities she attended or taught at. The

participant had no significant difficulty with construing *A Good School*. Her constructions seemed to avoid pragmatic discussions of facilities or resources in favour of greater emphasis on philosophical issues. Question marks on the cluster analysis indicate fields that were not applicable to the element in question. The interview flowed smoothly and the subject seemed quite forthright in her opinions.

Cluster analysis I

Figure 14 shows a cluster analysis for the repertory grid interview data found in Appendix H. Within the context of collaborative reflective practice, the interviewee had agreed to discuss her ideas about what constitutes or characterizes a *good school*. The elements used were schools that the interviewee felt she knew well enough to have an opinion on. This distinction was left to the discretion of the interviewee, who in this case decided to include university settings with which she was familiar, in addition to schools she attended, taught at and sent her children to. Philosophical themes of community (*School is separate from the rest of life experience/ A valuing of the whole person*) and equality of education (*Rigid adherence to policy and programming/ Attention is paid to meeting the diverse needs of students*) were evident. The absence of ratings for the two universities on the construct *Parents feel unwelcome in school/ Opportunities for meaningful involvement* was logical given that the elements fell outside of the range of

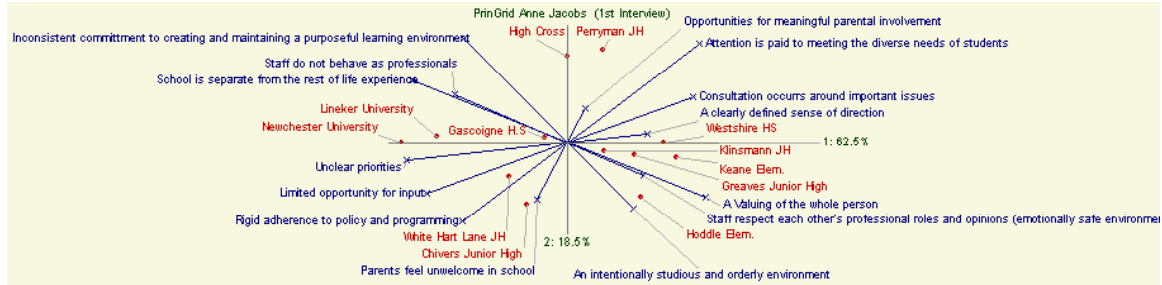


Figure 15. Anne Jacobs (first interview) principal components analysis

Principal components analysis I

The principal components analysis in Figure 15 above provided further distinction to the groupings identified in the cluster analysis. The schools at which Anne had taught (High Cross and Perryman) lay quite clearly outside two distinct groupings. Based on the construct labels, these groupings could be broadly described as the *good schools* and the *bad schools*. In the follow up interview, this pattern was attributed to the diversity of population (see note 9, Appendix N), implying that at a more diverse school, Anne found that her judgments between good and bad became more complex. For Anne, a good school was characterized by being rooted in a community where decision-making was shared and based on professionals showing mutual respect for roles. Diverse student needs were met within the context of a studious and orderly environment where everyone was valued. Her approach was holistic and focused on themes of equality and community.

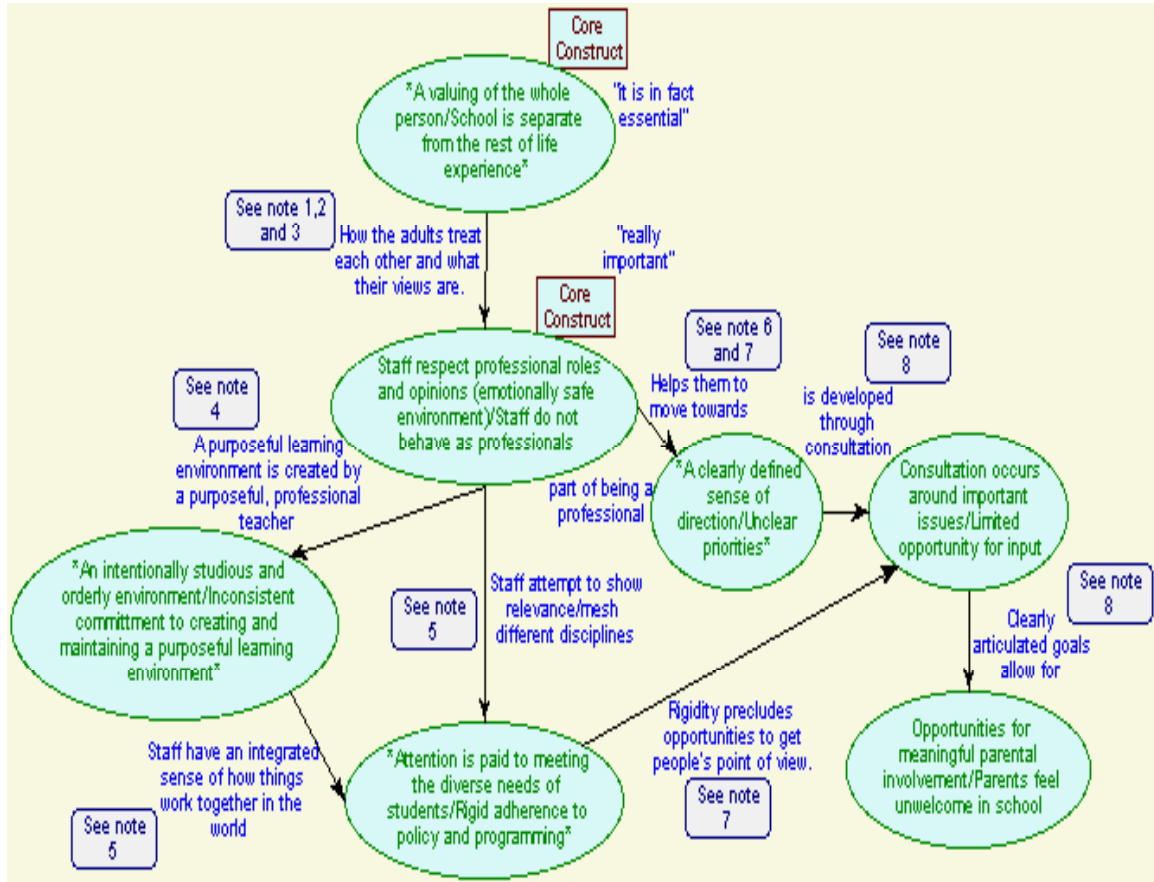


Figure 16. Anne Jacobs (first interview) concept map

Conclusions from Anne’s first interview can be represented in the form of a concept map (see Figure 16), developed from analyzing the transcript of the follow up interview. As detailed in Chapter Three, references to notes on the concept map may be found in Appendix N and provide supporting evidence for the map structure. Arrows on the map characterize the hierarchical relationship between constructs. For Anne, the central core of a good school relied upon valuing everyone and staff respecting

professional roles and opinions. Other roles, responsibilities and functions were then connected to these two central constructs as indicated on the concept map.

Process analysis II

Anne was an enthusiastic participant. Having completed and discussed a grid previously, the interview proceeded smoothly. The subject's selection of *schools I know* was very broad and inclusive, ranging from her own schools through those of her children, and on to both schools where she taught and universities she attended or taught at. She had no significant difficulty with construing *a good school*. Nine constructs were elicited (two more than in the first interview). Her constructions maintain a focus that can be described as *student-centred*, with six of the nine constructs relating to the needs or affective domains of students. Anne made reference to how difficult it was to rate elements that she had known in different contexts (as a parent, as a teacher). She was encouraged to return to the construct within the context of *a good school*, which clarified the process for her. The interviewee was clearly engaged by the process and made frequent reference to various aspects that she had given thought to in the interim period since the first interview. As before, the elements used were schools that the interviewee felt she knew well enough to have an opinion on. This distinction was left to the discretion of the interviewee. In the second interview, Anne decided to omit Perryman School on the grounds that having completed the first interview she did not feel she knew it well enough to accurately answer all questions. She continued to include university settings with which she was familiar in addition to schools she had attended as a student, taught at and sent her children to.

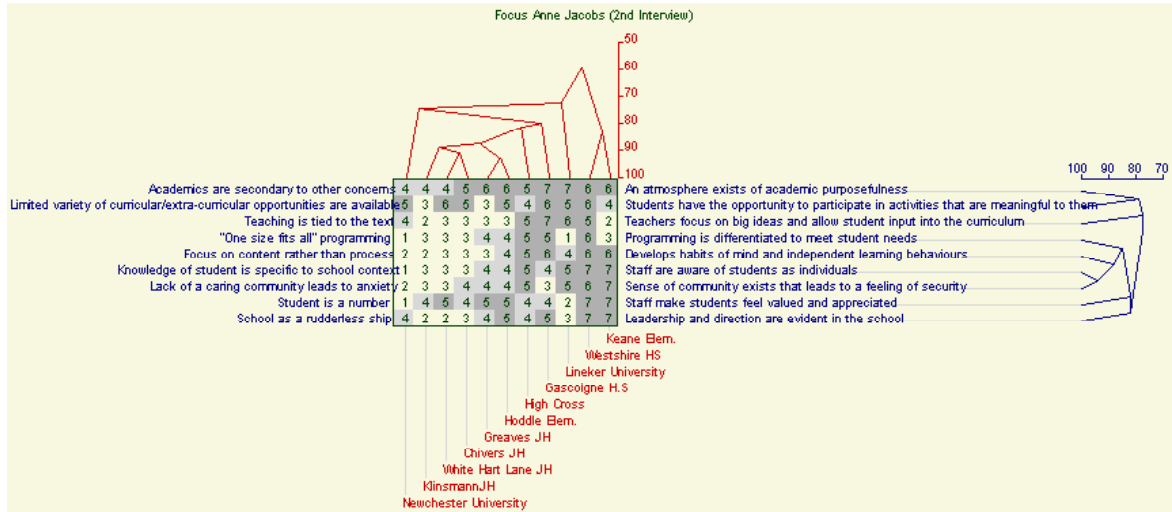


Figure 17. Anne Jacobs (second interview) cluster analysis

Cluster analysis II

Significant patterns that appeared included the relatively narrow range (three points) of responses to the construct *An atmosphere exists of academic purposefulness/ Academics are secondary to other concerns*. Furthermore, the tendency for all ratings to be greater than four on this construct could be evidence of a social desirability bias effect. The generally low scores on the construct dealing with differentiated programming was likely indicative of the interviewee’s experiences as a resource teacher. In comparison to the first interview, several schools appeared to have been significantly re-constructed. Notably, Lineker University was framed more positively, as was High Cross. Conversely, Klinsmann Junior High, together with Chivers and White Hart Lane Junior High were re-constructed in a more negative light.

Principal components analysis II

The principal components analysis illustrated the changes in construal quite clearly (see Figure 18). High Cross was repositioned centrally within the positive sheaf, albeit close to the intersection of the axes indicating a weaker correlation with the constructs than those schools further out. Lineker University found itself occupying an outlier position, similar to that of High Cross and Perryman in the first interview. In subsequent discussion, Anne attributed this positioning to the ability of a single teacher to influence a student’s judgment of a good school and also elaborated on the resulting need for consistency within a school in order for it to be a good one (see note 8 and 9, Appendix O).

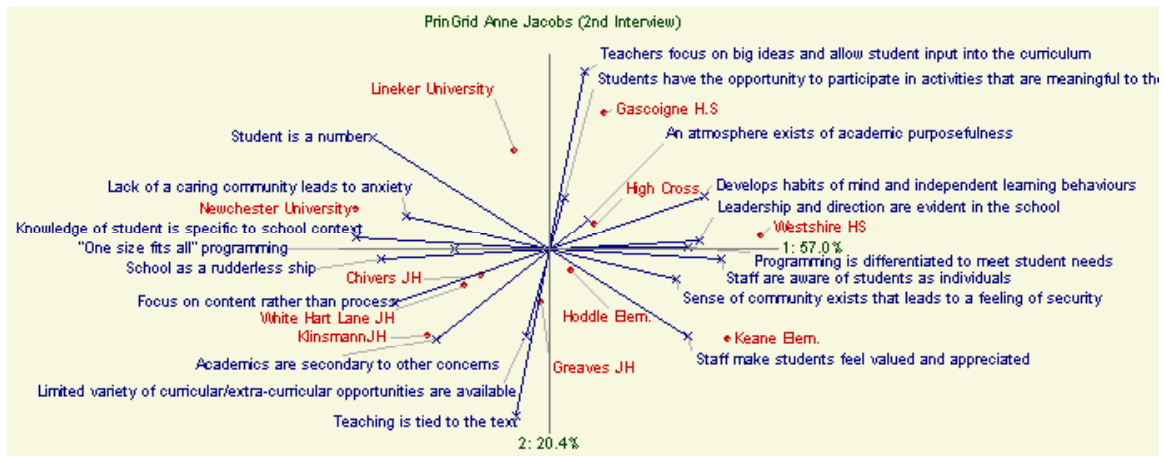


Figure 18. Anne Jacobs (second interview) principal components analysis

For her second interview, Anne characterized a good school as being more a function of professional staff members’ creating a sense of academic purposefulness. This was grounded in shared belief systems that would contribute to creating a caring community where individual needs were recognized, valued and met through differentiated programming. The importance of meaningful learning opportunities for

students was a new and significant development that was attributed largely to the book study. These themes of academic purposefulness, the security implicit in a caring community and the need for participation in meaningful activities were apparent as being core constructs. The idea of academic purposefulness seemed broadly analogous to professionalism. As a concept for Anne it encompassed several other constructs regarding leadership, differentiated programming and developing habits of mind/independent learning behaviours, which she saw to be implicitly connected. The role of the construct *Staff make students feel valued and appreciated/ Student is a number* occupies an interesting position relative to the core constructs. While central to Anne's belief system (a similar item was a core construct in the first interview), it now occupied a position as more of a functional outcome derived from the fulfillment of responsibilities relating to core constructs. Fulfillment of these core professional responsibilities became super-ordinate to more affective constructs of valuing and respecting views.

These and other observations from Anne's second interview are represented in Figure 19 in the form of a concept map, developed from analyzing the transcript of the follow-up interview. References to notes on the concept map may be found in Appendix O and provide supporting evidence for the map structure. Arrows on the map characterize the hierarchical relationship between constructs.

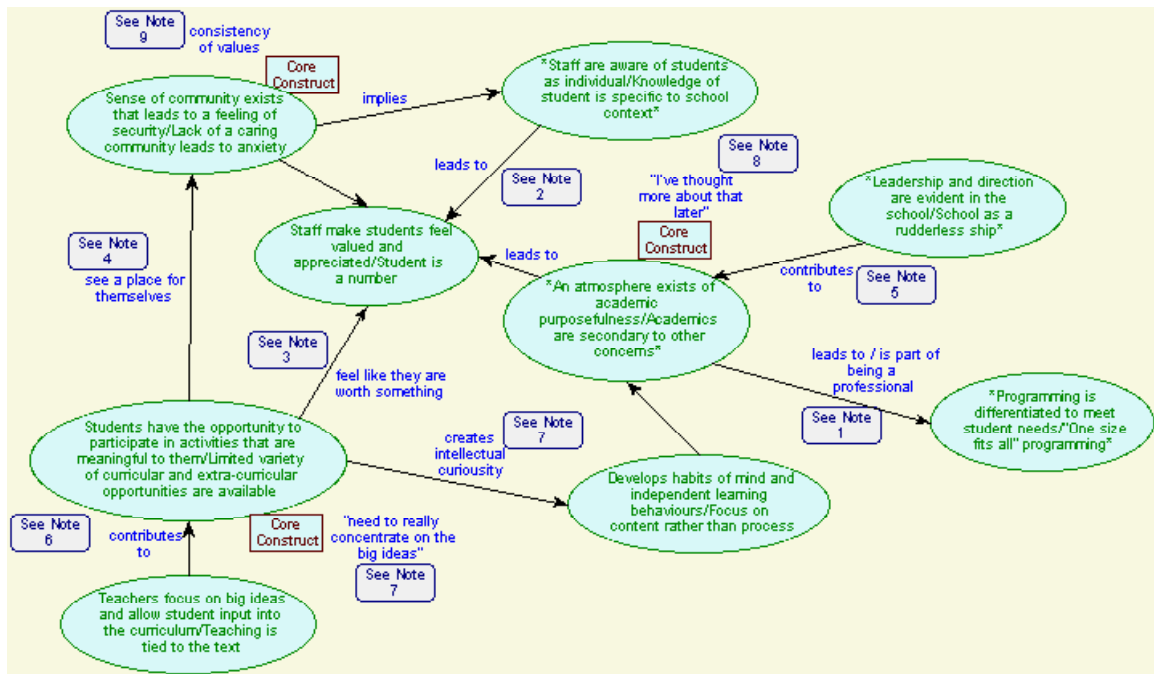


Figure 19. Anne Jacobs (second interview) concept map

Maureen Johnstone

Introduction

Maureen Johnstone began the study as a Grade Six teacher at High Cross, before moving on in the second year to teach half time in Grade Five, and half time Foods and Nutrition to Grades Seven to Nine. She has spent the bulk of her teaching career at High Cross, save for one year at Sterling Elementary School. She has two older children who attended a variety of schools within the same division as High Cross.

She is known for being a passionate educator, and approaches her job with energy and dynamism. She is very much an advocate for the school, proclaiming its qualities to all who will listen. She joined the teaching profession somewhat later in her life, having previously worked in the fields of culinary arts and childcare. She involves herself actively in the life of the school, maintaining the school garden with her class, playing a

central role on committees for Earth Day, Remembrance Day and House activities, and coordinating her famous staff get-togethers.

Process analysis I

Maureen was a willing participant in the repertory grid interview, but initially struggled with the construct elicitation process as she grappled with the diversity of the various contexts in which she *knew* the schools she had chosen. Of the seven elements, one was the school she currently taught at (High Cross), five were schools her children had attended, (High Cross, Diefenbaker High School, Sussex Elementary, Surrey Elementary and Clarkson Junior High), one school was where she had completed her teaching practice (Sussex), one school (Sterling Elementary) had been her first place of employment as a teacher, and one school (Assiniboine High School) had been her own high school. While she found it hard to compare schools initially, she settled into the pattern of elicitation after the first two constructs, and had little difficulty construing her thinking. The score for Sterling Elementary on the construct *Staff are supported in their professional decisions/No administrative support for professional decisions* shows a question mark as Maureen did not feel she had enough experience at the school (where she completed her teaching practice) to give a reasonable answer.

Cluster analysis I

As noted in the process analysis, Maureen has spent the vast majority of her teaching career at High Cross. She mentioned several times that she felt many of her scores were guesses rather than objective judgments. Nonetheless, several patterns in the data were apparent (see Figure 20). In terms of the elements, it was striking how each school was so clearly differentiated from the others. Even the two most similar schools

(Surrey and Sussex) were less than 80 per cent similar as good schools. Interestingly, the school Maureen teaches in (High Cross) and the high school she attended (Assiniboine) are less similar both from each other (approximately 60 per cent), and also from the central cluster of schools that she experienced mostly as a parent (approximately 65 per cent similar).

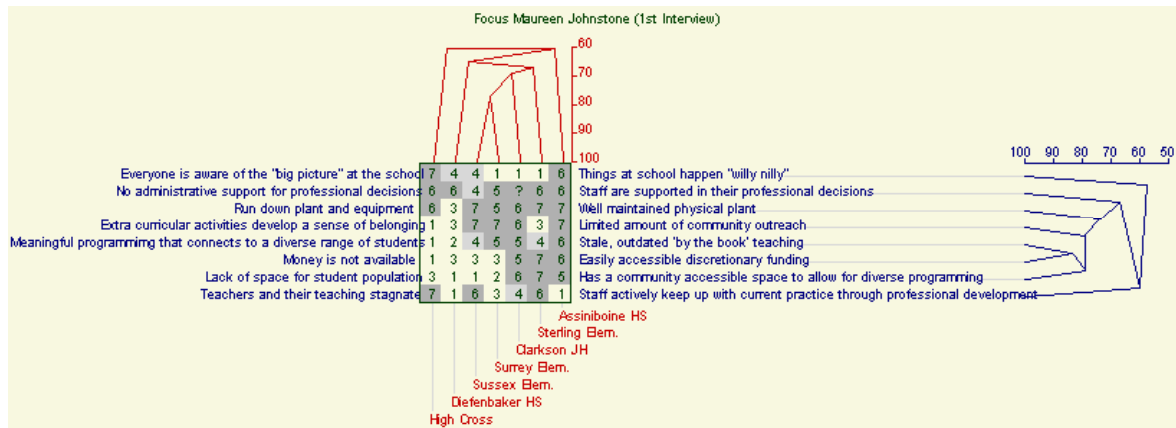


Figure 20. Maureen Johnstone (first interview) cluster analysis

In spite of her concerns about the various contexts in which she knew the schools as being *good*, the data implied that each school had quite specific qualities that she was aware of. This viewing of each school as having its own unique qualities indicated a centred and grounded approach to her construals. The absence of constellatory constructs that allowed predictions to be implied for other ratings suggested open mindedness and a tendency for avoiding stereotyping in her thinking.

Observing the constructs, the most notable feature related to the diversity of ideas and the general pattern for them being one of distinction rather than similarity. Even the closest pairing (*Easily accessible discretionary funding/ Money is not available* and

Meaningful programming that connects to a diverse range of students/ Stale, outdated, by the book teaching) is only approximately 85 per cent similar. Each construct almost stood alone thematically, covering school planning, support for professional decisions, physical plant, developing community, meaningful programming, financial support for discretionary projects and professional development. Finding patterns within the data was difficult as each school was judged on its merits within the individual frame of reference provided by each construct. Even accounting for the first, fourth and fifth constructs and scores being reversed from the original interview (see Appendix J), it is still necessary in Maureen's cluster analysis to consider each school on an individual basis in order to see how she construes. Taking her current school (High Cross), she sees it as a place where in spite of a lack of money and an appropriately designed space (which would make it a better school), and disregarding her feeling that things happen in an unplanned way, staff keep up with, and are supported in their professional development and decisions, delivering meaningful programming and extra curricular activities that develop community. By comparison, looking at Surrey Elementary (a school attended by one of her children), she saw it as a place where in spite of everyone being aware of the 'big picture' in a professionally supportive and well-maintained building, there was a tendency towards teacher stagnation and outdated teaching. One possible inference would be that the principal at this school was effective in terms of administration, but perhaps less good at instructional leadership.

Principal components analysis I

The principal components analysis in Figure 21 reinforced many of the observations made in the cluster analysis above. To a large degree, each of the constructs

stood alone as a spoke on a balanced wheel, rather than aligning with other constructs as a sheaf. One exception might be the closer alignment between the constructs *Well maintained physical plant/ Run down plant and equipment* and *Has community accessible space to allow for diverse programming/ Lack of space for student population*, although clearly the alignment made sense on an intuitive level.

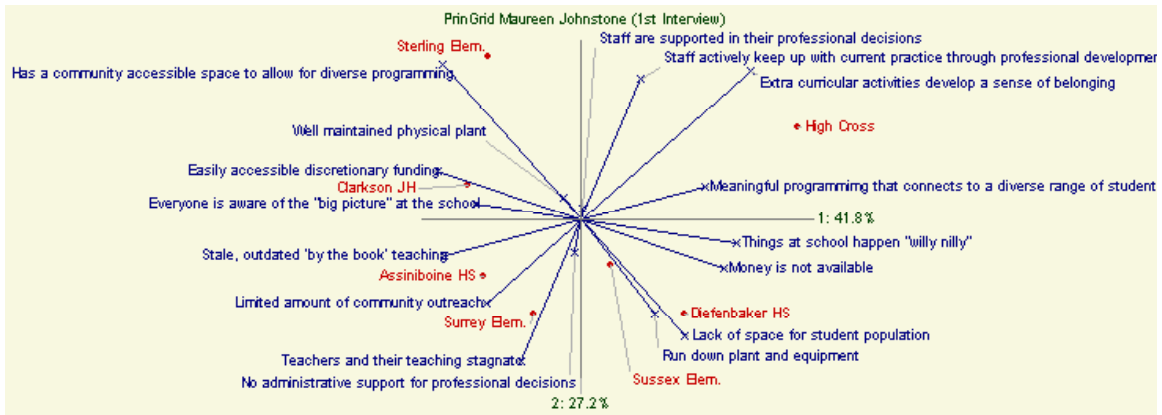


Figure 21. Maureen Johnstone (first interview) principal components analysis

The spacing of the elements (schools) was again indicative and reflective of the way in which Maureen saw each school as a separate entity, with its own strengths and weaknesses. Certainly High Cross was located closer to a greater number of likeness poles of constructs, whereas Surrey seemed closer to a greater number of contrast poles, but there was no cluster of clearly *good* or *bad* schools apparent.

A synthesis of Maureen's thinking is presented in Figure 22, with supporting notes from the follow-up interview referencing Appendix P. Maureen's principal themes involved developing a sense of community, personal investment and professional autonomy. These themes were supported by core constructs that allowed individuals to

have a voice in an ongoing planning process that developed a sense of belonging and a meaningful program that met student needs. The cyclical nature of the ongoing process (see notes 2 and 11) was a key feature of her thinking patterns.

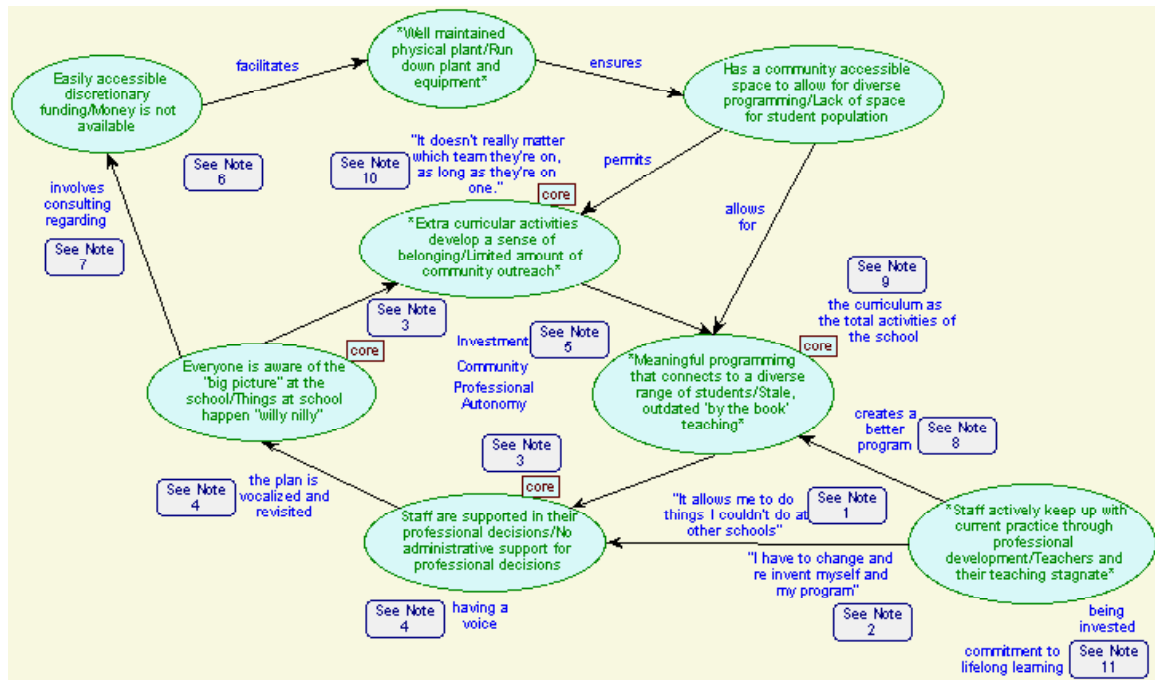


Figure 22. Maureen Johnstone (first interview) concept map

Process analysis II

Having completed a first repertory grid interview previously, Maureen was notably more at ease in the second interview. She decided to work with only five elements, dropping both Surrey and Sterling Elementary on the basis that they were outside of her range of convenience (i.e., after reflection, she did not feel that she knew them well enough). For the five elements, she chose the school she currently taught at (High Cross), the schools her children had attended, (High Cross, Diefenbaker High

School, Sussex Elementary and Clarkson Junior High), the school where she had completed her teaching practice (Sussex) and her high school (Assiniboine High School).

Overall the interview proceeded smoothly and efficiently.

Cluster analysis II

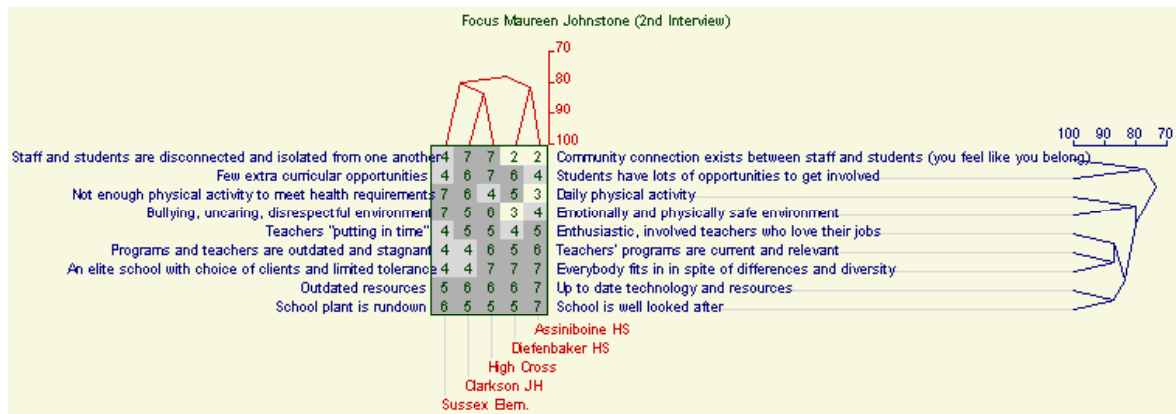


Figure 23. Maureen Johnstone (second interview) cluster analysis

Like her first interview, the schools in Maureen’s second interview were notable by their level of differentiation from each other (see Figure 23). As might be expected, the two high schools formed a cluster (just over 80 percent similar), as did the two junior high schools (also just over 80 percent similar), with the lone elementary school being in turn a few percent less similar compared to the junior high schools. Although the five schools were less differentiated overall than the seven schools used in the first interview, she was still clearly viewing each school as having its own unique qualities.

Similarly, observing the constructs, the most notable feature once again related to the diversity of ideas and patterns of distinction rather than similarity. No constructs were more than approximately 85 percent similar, and even where there might be good reason to expect a connection (e.g., between *Up to date technology and resources/Outdated*

resources and *School is well looked after/School plant is rundown*) there was still differentiation apparent between constructs. As noted in the first interview, each construct almost stood alone thematically, and the constructs themselves followed a broad range of themes with little duplication. Finding patterns within the data proved to be challenging. The principle previously noted, wherein each school was judged on its merits within the individual frame of reference provided by each construct, continued to hold true.

Principal components analysis II

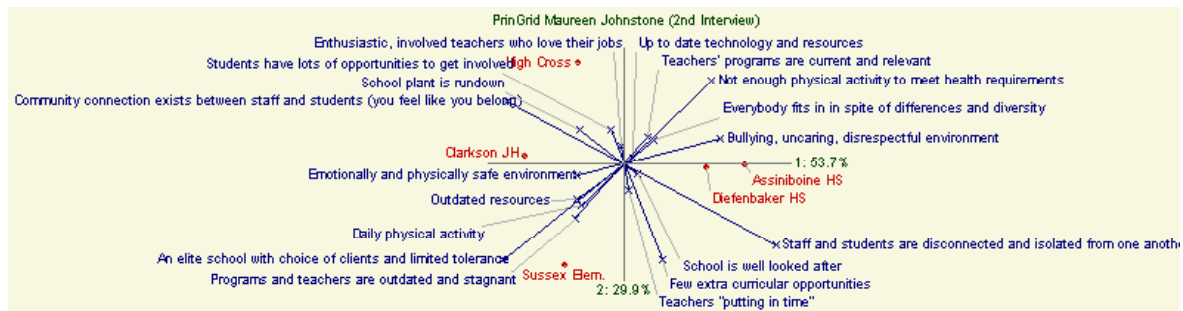


Figure 24. Maureen Johnstone (second interview) principal components analysis

Like the first interview, the principal components analysis in Figure 24 showed a considerable degree of differentiation between both elements and constructs, as evidenced by the spoke-like arrangement of the constructs and the widely disparate plotting of the schools. The two principal components accounted for 83.6 percent of the total variance in the data. Although this is almost 15 percent higher than the components calculated for the first interview, it must be remembered that the absence of two elements (as noted in cluster analysis II above) would obviously have reduced the total possible

variability of the data. Once again, the spacing of the elements is reflective of the way in which Maureen saw each school as a separate entity, with its own strengths and weaknesses. There is no cluster of clearly good or bad schools apparent, and further examination of the construct poles reveals how difficult it would be to decide where on the analysis to plot a good or bad school if one existed. Unusually, likeness and contrast poles (which for the purposes of this study could be said to equate broadly to good or bad) often find themselves side by side with no particular order discernible (e.g., *Outdated resources* is plotted close to *Emotionally and physically safe environment*, the construct line for *School is well looked after* is tightly aligned with *Staff and students are disconnected and isolated from one another*). All of these observations would reinforce the points made earlier about the cyclical, grounded and reflective nature of Maureen’s practice.

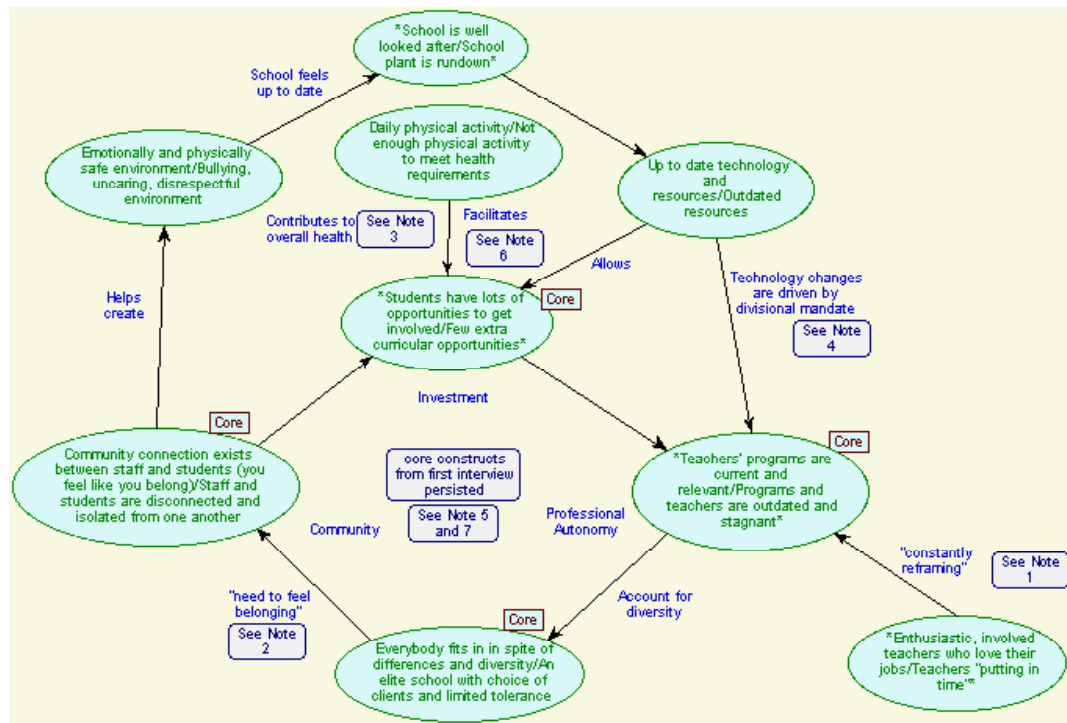


Figure 25. Maureen Johnstone (second interview) concept map

A synthesis of Maureen's thinking is presented in Figure 25, with supporting notes from the follow up interview referencing Appendix Q. Maureen's principal themes from the first interview persisted (developing a sense of community, personal investment and professional autonomy.) Core constructs were once again reflective of these principal themes. A number of new constructs that appeared in the second interview were attributed by Maureen to two factors, these being her changes in job assignments at school, and her practice of constantly reframing her practice in light of new perspectives and information (see note 1 in Appendix Q).

Chapter Five: Discussion and Conclusions

In the previous chapter, results were presented that developed profiles of how constructs changed for the three individuals around the idea of a good school. In Chapter Five, three principal themes are pursued: Firstly, the nature and processes of the construct changes for each subject are analyzed. Secondly, an evaluation is provided of the potential that exists for use of personal construct theory and repertory grid technique as a tool for collaborative reflective practice with teachers and principals. Finally, the question of how personal construct theory might integrate with themes of school leadership is addressed.

The nature and processes of the construct changes

In their examination of *Social Constructivist Views of Learning*, Prawat and Peterson (1999) outlined the comparatively recent emergence of social constructivism as a theory, and put forward a strong case for its importance within the world of education. Describing the position as a *post positivist* one, they point out how “Events are always construed – and it is this construction that one seeks to verify. Facts do not force themselves upon us but are constructed in the process of developing and testing out concepts or ideas” (p. 204). This move from the scientifically traditional, positivist search for objective truths, to a continuous cyclic negotiation of meanings has profound implications for education, as it concerns itself with the very nature of how knowledge, and hence learning, are defined and understood. Any attempt to analyze a participant’s construct change, in the form of new knowledge or understanding, must be underpinned by a clear vision of how meaningful learning takes place.

To this end, Novak (1998, Chap. 4 & 5) drew on Ausubel’s theory of meaningful learning to examine how knowledge is learned, created and used. Novak suggested three

types of cognitive learning interact with each other to create understanding.

Representational learning describes how humans initially associate and recognize words, signs or symbols as labels for objects or events. Conceptual learning is defined as the perception of regularities in such objects or events. Propositional learning describes the process by which words are combined to make a statement about an object or event. By extension, meaning becomes a composite of the propositions that we know that contain a concept.

Concept formation and concept assimilation describe two further important processes in conceptual learning. Concept formation generally occurs as a result of concrete experience with objects and events that results in perceived regularities. Concept assimilation describes a more complex process of meaning building, wherein new and existing concepts are linked together to form propositions about events or objects. This process of relating new information to existing relevant aspects of the individual's knowledge structure is referred to as *meaningful learning*, and contrasts starkly with rote learning in that it produces constructive changes in a learner's network of neurons.

Delving more deeply into the precise nature of meaningful learning is helpful in explaining constructive changes. The idea of *subsumption* is that existing concepts, to which new concepts are linked, act as *subsumers*,

...facilitating movement of relevant information through the perceptual barriers and providing a base for linkage between newly perceived information and previously acquired knowledge. Furthermore, in the course of this linkage, the subsuming concept becomes slightly modified, and the stored information is also altered somewhat.

(Novak, 1998, p. 59)

As the name suggests, *obliterative subsumption*, occurs when the original subsuming concept has been integrated and altered to the point that the specific messages learned are no longer retrievable; they have been assimilated into a wider network of understandings.

Novak (1998, p. 63) detailed how meaningful learning allows for the development and elaboration of subsuming concepts. This ongoing iterative process of refining concept meanings by increasing dimensions of precision and specificity is referred to as *progressive differentiation*, and can occur when new concepts are added, and also during the restructuring of existing segments of a learner's cognitive structure. A further important dimension of progressive differentiation identified by Novak is that, unsurprisingly, concept development proceeds more smoothly when the most general and inclusive concepts are established first, and then progressively differentiated for detail and specificity. Of particular significance to this study, he noted, "Determination of what in a body of knowledge are the most general, most inclusive concepts and what are subordinate concepts is not easy" (Novak, 1998, p. 63). He went on to suggest that as we think primarily in terms of concepts and related propositions, having a clearly established cognitive framework is an important foundation for effectively directing subsequent actions and performance of skills.

Processes of subsumption, and progressive differentiation produce both quantitative and qualitative changes within conceptual frameworks. In meaningful learning, we not only have more concepts and propositions, but also a more widely developed set of cross linkages between them. These cross linkages represent *integrative reconciliations* (Novak, 1998, p. 64) wherein learning new concepts involves the questioning, and subsequent progressive differentiation of concepts in order to reconcile

the new idea with the existing cognitive framework. A good example might be in the field of science, where development of the concept of a cell as a unit of living matter might cause a student to progressively differentiate the meaning of the representation from their existing concept of a cell in a goal. An integrative reconciliation that might result would be a greater understanding of the importance of context in comprehension. Subsequent learning of the concept of a cell as a device for producing electric current through chemical action will promote even greater progressive differentiation, along with the required integrative reconciliation of creating new levels of differentiation for the concept *science* (i.e., into different fields such as physics, chemistry and biology, each of which might have its own specific meaning for the concept). Novak (1998, p. 66) suggested that during meaningful learning, subsumption, progressive differentiation and integrative reconciliation occur simultaneously, and lead to qualitative improvements in the conceptual hierarchies that subsequently guide our actions.

Other ideas identified by Novak (1998) that are significant to the study include superordinate learning, the nature of creativity and the implications of constructivism for effective teaching or management. Superordinate learning occurs when an important new, broad, general concept simultaneously subsumes the meanings of previous concepts and adds new levels of complexity. Such revelatory moments are familiar to most learners, as, although uncommon, they are frequently memorable and significant to our subsequent understanding and cognitive development. Often associated with superordinate learning, Novak suggested, “creativity is simply successful integrative reconciliation or superordinate learning *and the emotional desire to do this*” [my italics] (Novak, 1998, p. 73). For Novak then, it is a by-product of meaningful learning. In addition, he suggested

creativity requires a well-organized cognitive framework as a prerequisite. This is then enhanced by attributes of confidence and skill, and is leveraged by emotional and cognitive intelligence. Developing this further, he discussed how the ideas of meaningful learning and creativity link to the creation of successful learning environments through a process of successfully negotiating meanings:

My theory is that meaningful learning must underlie the constructive integration of thinking, feeling, and acting if learners are to be successful and achieve a sense of empowerment – and also a sense of commitment and responsibility. The responsibility is to themselves as learners, to peers, and to the learning environment... it is the teacher's responsibility to seek the best possible negotiation of meanings and an emotional climate that is conducive to learning meaningfully.

(Novak, 1998, p. 113)

He went on to suggest that effective teaching or managing requires meaningful learning that achieves progressive differentiation of cognitive structures, leading to an enhancement of the learner's *I'm okay* image. The function of meaningful learning in meeting the ego needs of learners is not to be underestimated. It relates to the important role of emotional desire in creativity. The enhancement of the learner's *I'm okay* image and fulfillment of ego needs creates a subsequent desire for more and greater meaningful learning. This cycle of learning is the principal basis for an individual's ongoing skill development.

I will now analyze the participants' construct change over the course of the study, using Novak's framework outlined above.

John Reimer

Looking back at the results of John's repertory grid interviews, it is possible to discern a number of qualitative changes with his constructs. To begin with, and perhaps most obviously, his ideas of what constitutes a good school became progressively differentiated. His initial position was one where he viewed a good school as being largely determined by the presence of an admissions policy. This in turn ensured a culture wherein community values could be easily inculcated, and where academic achievement was a central emphasis. At odds with this position was his simultaneous sense of the importance of exposure to different ideas and values in an educational setting, and a requisite need for diversity of programming. The level of cognitive dissonance this created appears to have initiated a number of differentiations and subsequent reconciliations.

Talking with John it was apparent that he initially saw a good school as largely being defined by high levels of academic success (as measured through grades, exams and scholarships). It was natural for him to associate good schools with private schools, as, at least in his experience of them, they were able to select more academically oriented students. In many ways the level (middle years) and school he currently teaches at, when construed within this framework, was damaging his I'm okay ego position. Middle years students were developmentally incapable of operating at his desired level of thinking, and the majority of parents at the school had a different level of expectations from those of a private school. As a result, he appeared to feel as if his strengths and talents were being wasted on his current teaching position.

By the second interview, this central premise had been re-assimilated to the point of obliterative subsumption. The criteria by which a school was judged had shifted from

one based on academic outputs, to paying closer attention to the processes taking place for those involved in the system. Specifically, there was greater progressive differentiation evident regarding understanding the developmental needs of middle years students, as opposed to students in high school. Further to this, his new integrative reconciliations caused him to form some significant improvements in his conceptual hierarchies. As can be seen in Figure 13, when meeting adolescent needs is a principal function of a good school, a key role becomes one of developing the relationship between student and teacher. In turn, this implies that effective middle years teachers have to be caring.

The creation of a broader and deeper framework by which to view a good school had some interesting dimensions for John. By his own acknowledgement, he recognized his newly found understanding of the significance and importance of taking an interest in his students' lives. At the same time, he also recognized his own hesitancy to perform this function, alongside the acknowledgement that it would make him a more effective teacher. As noted earlier in the chapter, these assimilations and reconciliations facilitate meaningful learning, which as Novak has suggested creates a sense of empowerment, in that one understands the situation clearly enough to attempt seeking a solution. Whether John had yet developed the concomitant sense of commitment and responsibility was unclear from the interviews. He could be described as having moved from a position where no problem or issue exists, to one where he accepts that there is an issue and is contemplating what to do about it.

Regarding construct change cycles, John identified most closely with the creativity cycle. As described by Jankowicz (2004, p. 219) the creativity cycle is a

process that consists of alternation between tight construing (which allows for effective action) and looser construing (that facilitates searching for alternatives). Having revised the construct set to allow for efficient predictions, tight construal for effective action is resumed. Using the terminology of personal construct psychology, there was clearly a high level of *implicational tightness* regarding the strong link between private schools, academic achievement and good schools. The combination of repertory grid technique, the book study and the collaborative reflective practice of discussing the results (particularly the first principal components analysis) allowed him to examine what his thinking might be like if this implicational tightness did not exist, and to formulate a number of other postulates for consideration. This allowed for a broader and more developmentally appropriate conceptualization to develop. It is not so much that John changed his mind; he still saw the private schools as good schools. Instead, he developed a more extensive, and at the same time inclusive framework for his conceptions, within which his current school was able to be framed more positively. Such a change had clear implications for his I'm okay ego state, which in turn might feed into an ongoing cycle of further development of skills through meaningful learning.

A useful perspective on the broader nature of these construct changes can be drawn from recent literature on business or life coaching. O'Connor and Lages (2007, pp. 220-228) discussed the theory of *developmental coaching*. Their model suggested that adults naturally gravitate towards certain developmental stages. Through various forms of mental and emotional growth, humans pass from one stage to another, either temporarily or on a more permanent basis. The role of a coach is to facilitate this movement as part of developing a client's capacity for constructing an increasingly rich and varied world.

Beginning with the onset of formal reasoning as a first stage, they list the subsequent stages as individualist, community member, self-authoring and self-aware.

Individualists see themselves as separate from others. They tend to take their own perspectives on matters and consider other people's opinions from the point of view of how it might affect their own well-being. The community member stage, (sometimes referred to as the interpersonal), is the position gravitated to by more than 50 percent of adults. They describe it as the conventional social stage, where people are able to adopt many perspectives. People at this stage adhere to community values and use best practices in work environments. One possible limitation is that they are inclined to feel obligated to adhere to internalized group values and feel guilt if they are unable to meet them.

Those who gravitate towards the self-authoring (or inter-individual) stage understand others' viewpoints, but are not beholden to them. They define themselves through their own values and integrity, and possess greater levels of self-insight. Their actions are determined by their values and they hence have a greater capacity for taking risks. This allows them to define their own paths within their value systems, and facilitates professionalism by its detached perspective. Approximately 20 to 25 percent of adults commonly exist in this stage. Limitations of the stage include the tendency to use their value system without necessarily being able to reflect upon it. This can leave them appearing rigid in their thinking. The last stage identified is the self-aware stage and commonly accounts for about 10 percent of the adult population. In this stage, individuals move outside of their own value set and are able to take multiple perspectives as part of developing contextual awareness of a complex world. Their commitment is to the

development of others and the ongoing deconstruction of their own values to promote self-insight.

Applying this framework to John's construct changes, he naturally gravitated towards a more individualistic point of view. A result of participation in the study was that it made him consider other perspectives as they related to the functions of a school. By his own admission, it increased his level of objectivity.

IS: You said that second time you were feeling like you should be more balanced?

JR: Yeah.

IS: Like "How can I put a rating on there?"

JR: Yeah, when I think about it, I can easily see myself saying "OK, trying to convince you personally, or trying to convince somebody personally, as opposed to presenting something totally objective, it really has no... it's not good or bad... I think second time around I was more objective about it and less sort of personal.

(Reimer, 2007a)

While it would be difficult to make a definitive case that John moved to the community member stage on anything more than a temporary level, the very acceptance that movement occurred has significant implications when viewed as part of a spiral dynamics model of social and individual development. As O'Connor and Lages noted,

Each successive stage, wave or level of existence is a state through which people pass on their way to other states of being. When the human being is centralized in one state of existence (centre of gravity), he or she has a psychology particular to that state. His or her feelings, motivations, ethics and values, biochemistry, degree

of neurological activation, learning systems, belief systems ...conception of and preferences for management, education, economics and political theory and practice are all appropriate to that state.

(O'Connor & Lages, 2007, p. 220)

The real significance of seemingly slight shifts in construal lies in their subsequent effects on such cognitive and affective domains as those noted above. Novak's theory of meaningful learning had some clear parallels with this position. Progressive differentiation and integrative reconciliations of constructs led to qualitative improvements of conceptual hierarchies, which in turn was said to affect ego state, development of skills and further capacity for meaningful learning. Used in concert, the two theories can provide a useful framework for both analyzing and assessing the nature of construct change.

Anne Jacobs

In her first interview, Anne's core constructs related to her belief that an essential function of a good school was the valuing of the whole person, and that in such a place, staff would respect each other's professional roles and opinions. As noted previously in Chapter Four, this was in contrast to the second interview, where the creation of a good school was characterized as being a function of how well professional staff members created a sense of academic purposefulness grounded in shared belief systems. This theme, together with the security implicit within a caring community, and the need for participation in meaningful learning activities were apparent as being core constructs. Notable was the shift in role of constructs relating to feeling valued. Whereas previously

these had occupied a centrally important position, in the second interview valuing individuals became a by-product of fulfilling core professional responsibilities.

Examining these changes in terms of Novak's ideas on meaningful learning, comparison of Figure 16 (first interview concept map) to Figure 19 (second interview concept map) revealed clear evidence of a broadening and deepening of Anne's conceptual hierarchies. Not only were there more constructs in the second interview, but they also contained greater levels of detail and complexity. The subsuming of valuing the individual as a core construct, and its re-positioning as a functional outcome of professional behaviour had an important effect on Anne's perceptions and ego state. Initially, creating a good school was premised upon everyone feeling as she did about the importance of valuing individuals, and hence their professional opinions and roles. In this regard, the locus of control was viewed as being external, and largely beyond her control. By the second interview, a good school was characterized as being one where professional staff members created a sense of academic purposefulness grounded in shared belief systems. The locus of control became more internally focused. Rather than hoping that others shared her views, she framed her role in terms of the imperative for the development of shared meaning systems within the school community. Once again, while only a subtle change at first viewing, the inherent aspect of empowerment has profound implications for Anne's future motivation, commitment and sense of responsibility. From a position of sometime frustration with others' perceived unwillingness to behave professionally (as evidenced by their seeming inability to value individuals as she felt they should), she moved to a point where she recognized the need for negotiation of shared meanings, and acknowledged the desire of others around her to do the same.

As the resource teacher in the school, Anne spends much of her time advocating for students, promoting alternative perspectives and best practices, and attempting to negotiate win-win positions for her students. Viewing this within the coaching paradigm referred to earlier, these actions are clearly those of the community member stage. The change in Anne's locus of control referred to above suggests movement towards a more self-authoring stage of development. Self-authoring indicates a larger capacity for defining and creating one's reality, independent of the effects of others' thoughts and values. The greater sense of empowerment experienced as a result of the study was one indication of this developmental progression, as were comments such as the following:

AJ: I'm not very good at analyzing my own thinking sometimes, but I tend to be multidimensional, like I take it from all different areas and then kind of percolate it around and come up with something, but I think our conversations have been very interesting because it's forced me to focus on why I think that. Yeah, maybe I've always thought that, but why? And is it actually accurate? And that's why some of the change has happened, because I've looked at it a little differently thinking "OK, now you're, you know, forty years away from some of it, can you step back?"

(Jacobs, 2007a)

In addition to its insight into Anne's development from a coaching paradigm, the above quote was also illustrative of her processes from a change cycles perspective. When considering her own thinking processes on an individual level, her tendency was towards the C-P-C cycle. To make up her mind on an issue she would engage in circumspection, looking at various perspectives from her personal repertoire to find

propositional constructs that could help explain the situation. She would then pre-emptively construe the issue before engaging in control by choosing which pole of the construct to use and relate to.

Looking at processes stimulated by the collaborative reflective practice, she identified strongly with the experience cycle of anticipation, investment, encounter, assessment and construct revision:

IS: When you think about the process of change in your mind, ... there's this thing called the experience cycle, where you have an anticipation of how something works, and you have investment in that, and then when you encounter something else, a different point of view, or maybe something like the repertory grid, you assess that, and then possibly have to revise your constructs before you then anticipate again, "well maybe it's this way".

AJ: Well that's me!

IS: The experience cycle?

AJ: That's what I'm like, it all comes in, and I think "hmm, well there's one thing I hadn't considered, OK, what about if we look at that? Where does that take us?"

(Jacobs, 2007b)

For Anne, she had a clear sense of anticipation (*this is how I think it works*) and investment (*this is what I believe and how I accordingly will act*). Collaborative reflective practice, however, had a fundamental bearing on the nature of her encounter phase; by broadening the scope of her perspectives through discussion and reading, subsequent

assessment and constructive revision incorporated more progressive differentiation and integrative reconciliations.

A further feature for Anne was the role of the group process, with its attendant community building functions. The creation of a safe environment in which to voice ideas and opinions was particularly important, and had clear links to the creativity cycle in that the environment permitted and facilitated loosening of the implicational tightness of constructs. It allowed other ideas and possibilities to be explored by the group in a mutually supportive atmosphere. As someone who gravitated towards the community member role, this was a particularly important feature.

AJ: Well, I think the group experience... I mean, this is what I think needs to happen, this is the type of PD that I think needs to happen. There have to be certain issues that crop up, and people have to sit down and suspend their judgments, and talk together about them and be willing to make changes to their thinking. I thought the group was really valuable in terms of PD, bouncing ideas and people taking the risk of saying what they really think and reacting to the same piece of reading...

IS: And developing shared understandings of things...

AJ: And not something that you just go to and sit there for a while, and never discuss again, but that you're expected to come back next Tuesday and contribute.

(Jacobs, 2007b)

For Anne then, operating within a community member perspective, construct change was explained by a variety of models, dependent largely upon context as

determined by factors such as individual versus group processes, and the perceived emotional safety of a situation.

Although Anne is a vastly experienced practitioner, participation in the study was helpful in clarifying her thinking and assisting in her personal development. On this note, O'Connor and Lages (2007, p. 227) mentioned how stage three can easily become a plateau point in development. As a conventional social stage, there is nothing inherently wrong with this. They go on to suggest however, that coaching has evolved as a social mechanism to move people from stage three to stage four or five. As they suggest, having established oneself at the conventional social stage with the help of parents, teachers and other significant adults, there are then fewer options available for progress. For teachers, themselves engaged in developing young minds, the availability of catalysts such as mentoring, collaborative reflective practice and indeed repertory grid technique is of undoubted value.

Maureen Johnstone

As previously noted in Chapter Four, Maureen's principal themes persisted across the course of the study. Developing a sense of community, having a sense of personal investment and demonstrating professional autonomy were all supported by core constructs that allowed individuals to have a voice in the planning process of the school. Good schools developed a sense of belonging in individuals, and promoted meaningful programming that met student needs. The cyclical nature of the process was another key feature of her thinking patterns. It was quite apparent from both repertory grid results and interviews that her sense of what constituted a good school was being constantly reframed in light of experiences. She pointed out that some of these re-framings were

temporal, in that at various times in a school year, greater pressures come to bear in certain areas. When new construct themes emerged, they were often a response to factors such as changes of assignment, professional development work or divisional initiatives.

IS: And then, the physical activity, was that one showing up...

MJ: Well because of track, and because of nutrition and because of my teaching and the Healthy Schools committee, getting all these facts about these kids, and talking to [PE teacher] about all these kids who've gained so much weight in elementary and getting rid of the sugar, you know, all of that.

IS: So one of the things that triggered that was ongoing committee work, professional development work that you were doing through committee...

MJ: Being on "Healthy Schools" and changing my focus so "I'm teaching nutrition, so I'd better live it."

(Johnstone, 2007b)

An important point is that these re-framings were not construct changes, as much as ways of relating new construct themes to core value positions. In this regard, it appeared that Maureen engaged in a process of ongoing values clarification, referencing new experiences and situations to her existing core constructs. Furthermore, she was clearly able to take an objective viewpoint on the process. Several comments revealed a high level of awareness that the process of scoring or ranking used in repertory grid technique was not an absolute, or de facto judgment on a school. Instead she was able to view it as a tool for examining her own thoughts and feelings. For Maureen, the question

was less about whether a certain school was judged as good or bad, and more about what a good school would look like.

Referencing Maureen's construct change to cyclical models, it was apparent that she identified with all three models, albeit on different levels. Like Anne Jacobs, Maureen identified strongly with the experience cycle of anticipation, investment, encounter, assessment and construct revision. A principal difference however, is that operating on a community member paradigm, Anne saw the experience cycle as her normal mode of operation, albeit refined and improved by being part of a group process. To Maureen, the experience cycle was more relevant to the group process from the very outset.

IS: ... this idea of an experience cycle, where you are anticipating how something is, and then you become invested in it, so for example, with the book, you are thinking "how could something like this work?" and then you get to a point of investment where you say "this is what we are going to try and do" and then "encounter" as in do it, and then assessment of it, well, "how's it working" and then you might go through a revision of your constructs, maybe for the following year. I'm wondering whether that's something... I think an experience cycle would be an easier thing to do in light of a new idea that you've introduced.

MJ: For a group...and it could be the anticipation was from something somebody introduced, like the nutrition policy. And that came in. "We need to do this" (divisional policy) and then we investigated and came up with one, you know...

IS: And then you say “this is how we’re going to do it” and then it starts to change policies about what machines you have in school.

(Johnstone, 2007b)

Maureen’s sense of the experience cycle’s importance to the group process, and to collaborative reflective practice, is made more credible with examination of Kelly’s (1955) original writings on personal construct psychology. In discussing Kelly and the evolutionary nature of construct systems, Kenny (1984) noted the importance of active experimentation with ideas.

Since the anticipation of future events – and thereby relating ourselves to them – is the objective, then if something un-anticipated occurs we are immediately invited to reconstrue. In this manner, the endless succession of world events exposes our construct system to a process of validation and invalidation. Ideally, if we can incorporate these validation vicissitudes and revise our construction in the light of our experience, then our construct system continues to evolve as a live process.

(Kenny, 1984, Evolutionary Nature of Construct Systems section, para. 1)

For Maureen, participation in collaborative reflective practice, and book studies in particular, were seen as vital to the ongoing process of validation and construct revision. As Kenny (1984) noted “Kelly’s view of human learning and its limitations is put forward in terms of the notion that you can learn only what your framework is designed to allow you to see in events” (Evolutionary Nature of Construct Systems section, para. 3).

Participation in book studies allowed Maureen to learn in meaningful ways by expanding her cognitive frameworks. Hearing the author's perspectives and discussing their validity with other colleagues facilitated the process of ongoing reconstrual for her.

The creativity cycle also performed an important function in Maureen's eyes, and one that was intrinsically linked to the benefits of longer-term collaborative reflective practice.

IS: So the long-term nature of the whole process is actually a good thing?

MJ: Well sure it is, because don't you feel that many of the decisions we make, we don't have enough time to really figure them out? ... because the changes happens [sic] so fast... but things are being thrown at us all the time. I like to, I need to, think about things. And I need to think about them and not in a stressful way...

(Johnstone, 2007b)

This theme of collaborative reflective practice as an environment where one could periodically loosen one's constructs and explore other perspectives resonated strongly. Some clear perceived advantages were the safety and support of the group environment, the enhanced level of professional accountability that the group provided, and the improved team ethic.

IS: Does it make any difference doing that, say in the context of a book group? Like a group of 6 or 7 of us versus just off-loading on one person.

MJ: No, it's better in a group. I think it keeps you professional... And it ties... It makes a community. Everybody's in it together and, you know, "Where is it in

this book that tells me how to deal with so and so... because I'm gonna..." and it's just safe.

IS: So having collaborative reflective practice as a pattern in your school creates safer environments to explore things?

MJ: Well yeah...

(Johnstone, 2007b)

The increasing demands on teachers in the twenty-first century are well documented (Fullan, 2007, Chap. 4; Leithwood & Beatty, 2008, pp. 31-43). Based on Maureen's experience, opportunities for active, regular engagement in the creativity cycle, through use of collaborative reflective practice provide an important outlet for relief of stress. This in turn allows for better examination of new experiences and perspectives. The environmental context of a book study as group exploration implicitly makes no demands on participants regarding their level of commitment to a given perspective or idea. This creates a more open and less defensive mental stance. The tightly wound constructs of everyday teaching life are temporarily loosened in a safe and supportive environment. In such a setting, different ideas can be examined and reconstrual occurs more easily.

Looking at the CPC cycle, Maureen saw it as a logical extension of the decision making process, made all the more powerful when a group of educators entered into such a cycle together.

IS: One of the other ideas is this one of circumspection, pre-emption and control. So, the CPC cycle. Basically the circumspection, you are looking around for a construct, or something that will explain the way you are thinking or feeling or

acting about something, and then pre-emption is when, from a set of constructs, you choose, like, “that’s the one that describes how I feel about this” and then control is when you basically take a pole of that and say “this is the way I’m going to organize that aspect of my practice.” So...

MJ: Well, that would be that book! ‘Cause it would confirm what we were trying to do, for example, advisory groups. And now it’s finally going to happen, I mean, that’s a good one, because we knew it would work, it’s working but we really all have to, I don’t know...

IS: ‘Cause we did need to look around and get enough of us saying “You know, that would be a good idea.”

MJ: How does it work, and now let’s do it.

(Johnstone, 2007b)

This role of collaborative reflective practice in facilitating the development of a collective culture for change in schools was significant for Maureen. As was discussed in Chapter Three, her super-ordinate core constructs changed very little over the course of the study. As she encountered new situations, ideas and experiences in her working life, she integrated them into her existing construct system as she saw fit. In construct psychology terms, her system would be described as permeable. Kenny (1984) suggested:

Kelly introduces the notion of "permeability" as the central concept dictating change in construct systems. Changes occur within the overall comprehensive framework of the construct system, and the degree to which the more super-ordinate constructs are permeable then the more likely it is that the system can accommodate changes. A construct which is permeable is one which has a good

degree of elasticity or resilience and therefore the capacity to encompass new events. According to Kelly a permeable construct is one which "takes life in its stride". Such a construct allows one to add new experiences to those which the system already includes. By contrast, an impermeable construct is one which rejects new events purely on the basis of their newness.

(Kenny, 1984, Evolutionary Nature of Construct Systems section, para. 4)

In Maureen's ideal educational world, positive change is accomplished through the development of grounded and permeable core constructs. These are then reconstrued in light of insights gained through continuous collaboration.

Evaluating Repertory Grid Technique as a Tool for Teachers and Principals

In evaluating the potential for use of repertory grid technique within schools, the logical starting point as a piece of action research was clearly the experience of the participants themselves. The nature of their construct change has been outlined in some detail in the previous section. In this section, I will discuss the functions and roles repertory grid technique performed as part of their reflective practice process. This will be followed by an examination of the study with reference to Leithwood's (1990) model of teacher development. It is from this perspective, as a tool for staff development, that I will then discuss the possibilities for use of repertory grid technique in school settings.

John Reimer

Given John's inherently individualistic viewpoint, it is unsurprising that by his own judgments, the repertory grid technique had a limited effect on his thoughts and

actions. In our conversations, he often returned to a positivistic stance, suggesting that the myriad of temporal and affective variables at work essentially disallowed any potential for discerning objective truths. A good example would be our discussion of the more positive ratings for certain schools following our second, mid September, repertory grid interview.

IS: In most cases, well... the number always goes up. Any thoughts on that?

JR: Having a better day? Having a better day than the first time we did the interview?

IS: Better day? Better space for you personally? In terms of the first interview was March, second interview was September, do you think that would be significant? Like start of the year versus...

JR: Well yeah, I mean that would make sense wouldn't it? Time of the year, time of day, time of week?

IS: Do you think if I did a similar interview a month from now that your feelings might be "darker"?

JR: Very much. For me it would depend on time of day, time of week. If it was the end of a PD [professional development] day, or the end of three classes with 7B. Oh sure. I think it's safe to say that our mood swings... I think I'd have to say "how do you eliminate all of those affective things to really get a good objective view?"

(Reimer, 2007b)

Similarly, John was quite adamant that the repertory grid interview process had had little impact on his teaching, again citing an ambivalent position towards the perceived accuracy and objectivity of his thinking.

IS: Do you think it changed the way you think about teaching?

JR: The interview?

IS: Well, this process of actually thinking about it?

JR: No. If anything it makes me, like I keep thinking “Is that the right answer?” How much can I really say? You know if I step apart from this interview process, how much can I say that is really accurate?

(Reimer, 2007b)

In spite of this resistance to identifying any specific impacts of the study, John did acknowledge that it had made him think metacognitively:

IS: And so does a process like this change these things? Clarify them? Does it have any impact on what you’re doing and why?

JR: I don’t think it changes any of my methods or strategies, it would increase my consciousness of what I’m doing and why.

IS: It would, or it has?

JR: I can’t say. I haven’t consciously, this process hasn’t entered my mind much in the classroom, if at all between these sessions. Maybe I haven’t given it enough reflection, but nothing has really changed or rocked the way I was thinking or doing things before. It does cause you to consciously reflect, but I couldn’t identify any changes.

(Reimer, 2007b)

On a less equivocal note, he acknowledged the impact of having seen the polarizing effects of his pre-emptive constructs in the first repertory grid interview.

IS: What do you think your thought processes were in the first versus the second?

NK: Maybe just understanding more... what this interview was about. In the first one, I remember thinking “Oh, I really am quite pro-private school” and I’ve always known this, and thinking “Oh, I’m being a little too hard on High Cross” but... that’s not so much a reflection on High Cross as a reflection on me. So maybe my second interview was a little bit more objective. My first one was a little more subjective. Maybe because the second time around I’m realizing, OK, ... there’s no negative or positive reflection in my answers. They’re just answers, it’s just information... What I say about private schools, good or bad, what I say about High Cross, good or bad, isn’t the key issue. The thing is, High Cross as an example of any school that we can be talking about. So maybe the second time around I was being a little more objective and less kind of... championing a cause... Maybe that could be why.

(Reimer, 2007b)

A further point, clearly apparent in his language here, is how the repertory grid interview permitted a useful degree of distancing and abstraction to occur. This can be seen to be doubly important in light of the following:

IS: You said that second time you were feeling like you should be more balanced?

NK: Yeah... I think second time around I was more objective about it and less sort of personal.

IS: Do you think that has any impact on you as a teacher in terms of what you teach and how you teach? Going through that process of “Maybe I don’t have to be positional?”

NK: Oh sure. I think for sure, I mean teaching’s always been one of those things where it’s very hard to separate the teacher and the teaching... but so much of what we do is, for me, who I am, what do I believe.

(Reimer, 2007b)

As implied, a teacher’s belief and value systems are inextricably linked to practice. Working on a daily basis within the stressful milieu of a middle school requires a set of constructs that are implicationally tight. This, in part, could be said to explain many aspects of the slow pace of middle years reform referred to in Chapter One in that teachers are rarely afforded the mental space to process new ideas effectively. An advantage of repertory grid technique for John was its ability to facilitate a clarifying of his values through engagement in a creativity cycle. He was able to temporarily loosen his constructs and explore the validity of his beliefs and their implications.

IS: In terms of that creativity piece, did a process like this allow you to relax some of those implicationally tight things?

JR: Yeah.

IS: In terms of what makes a good school?

JR: Yeah, probably, sure, once you explore something a little bit, your ideas loosen up a little bit more, a little bit more, so that would make sense, the more you think about something, the more flexible your thinking becomes.

(Reimer, 2007b)

With these two themes, the role of values, beliefs and commitments in our construction of new knowledge, and the increased flexibility in John's thinking, it is reasonable to make the claim that significant change occurred in John's construct systems, even if he is loathe to admit it himself. Participation in the repertory grid interview process facilitated greater permeability of his super-ordinate constructs, which in turn, and over the course of time, allowed him to accommodate greater changes to his construct system.

Taking this idea further, the creation of knowledge resulting from changes in construct systems has significant implications for John's educational practice, whether he cares to admit it or not. As Nonaka and Takeuchi noted,

First, knowledge, unlike information, is about beliefs and commitments.

Knowledge is a function of a particular stance, perspective, or intention. Second, knowledge, unlike information, is about action. It is always knowledge "to some end." And third, knowledge, like information, is about meaning. It is context specific and relational.

(Nonaka & Takeuchi, 1995, p. 58)

It would be speculative, and beyond the scope of the study, to state categorically that John's development of new knowledge resulted in specific actions. Conversely, the data produced plainly illustrate the shifts that occurred in John's beliefs and meanings. This

increased permeability in personal constructs, developed through repertory grid technique, is of undoubted value in the promotion of organizational change through individual growth.

Anne Jacobs

In direct contrast to John, Anne Jacob was unequivocal in her belief that participation in the repertory grid interviews had had an impact on her thinking. She noted this on a variety of occasions.

AJ: No, I think that really I've been thinking about this quite a bit since we've been doing this...

(Jacobs, 2008b)

AJ: Well, let me give you an example. There's a big difference here in [school] for example, and it veers towards parents feeling less welcome... am I right? [confirmation]... Well I started thinking about this after we talked.

(Jacobs, 2008b)

AJ: I've been thinking about that a lot...

(Jacobs, 2008b)

Anne noted the way in which uniquely visual aspects of repertory grid technique facilitated the formation of new perspectives.

IS: Just by way of wrapping up, do you have any thoughts on the overall format of this study?

AJ: Oh, I think it's very interesting, and one of the most interesting parts is seeing different ways that it's grouped things, that I wouldn't necessarily have thought about. Like, some things to me fall naturally together, and others don't

right off the hop, but when I see them clustered in together, I think, wait a minute, of course that has an impact... I really see how important it is to see what underpins these things, because it's not on first look that you think how important these two things might be together.

(Jacobs, 2008a)

She also articulated quite clearly the benefits of a visual comparison of values within a process of construct change.

IS: Did the presentation, in terms of the graphing functions produce different awarenesses?

AJ: I think any way you see things presented for you, right out there [conscious and overt] is going to cause you to make some connections and think a little bit differently because you do see it differently. It's just another different input.

IS: So there's the element of accountability that's important to the reflective practice piece, and then there's the seeing things from different perspectives piece...

AJ: And then the balancing back and forth, thinking "Well there's this, but then there's this."

(Jacobs, 2008b)

Anne noted the difficulties of being asked to give each school a number value for constructs, while at the same time acknowledging its importance to the process.

AJ: Yes. I found it hard though. Well I just found it really hard to assign a specific number to it. Because I always felt, like I said before, that I was going, “Yeah, well, but this, but that...” but if I hadn’t assigned a number, I wouldn’t have been able to pinpoint as easily, well, which ones have you really changed about...

IS: So it forces the metacognition?

AJ: In a sense, yeah, it does help because you can’t help but zero in on these certain things and think “Well, that’s quite a big difference,” or “There’s no change there” or whatever. And then it doesn’t take long once somebody points it out to you to say, why? Because you start remembering what you were thinking about it, and think “Well, it’s got to be because I thought this.”

(Jacobs, 2008b)

The role of the element ranking/scoring process in almost forcing conditions that promoted greater self-awareness was a recurrent theme.

IS: Where do you see the whole construct/grid thing shaping or having a role in that process?

AJ: Well it’s about making an overt commitment to your point of view.

Assigning a number kind of does that in a way. Like, you can be conscious of how your thinking is changing up to a point but until you see that there’s been a shift, and have to justify why that is... Then you start thinking on a different level.

(Jacobs, 2008b)

On several occasions, Anne noted the benefits of combining repertory grid technique as part of a broader model of collaborative reflective practice. For her, it introduced a vital dimension of accountability, both to one's colleagues and to oneself (in terms of being able to better justify your professional beliefs and values).

AJ: Well, I think the group experience... I mean, this is what I think needs to happen, this is the type of PD that I think needs to happen. There have to be certain issues that crop up, and people have to sit down and suspend their judgments, and talk together about them and be willing to make changes to their thinking. I thought the group was really valuable in terms of PD, bouncing ideas and people taking the risk of saying what they really think and reacting to the same piece of reading...

(Jacobs, 2008b)

A further theme that emerged was the idea that many beliefs and values were rooted in experiences from a variety of different times in Anne's life. One of the advantages of repertory grid technique lay in the choice of elements (schools the participant was familiar with) as this allowed Anne to more clearly discern the times and experiences from whence key beliefs emerged. She was then able to subsequently assess them for their validity within her current practice.

AJ: ...I'm not very good at analyzing my own thinking sometimes, but I tend to be multidimensional, like I take it from all different areas and then kind of percolate it around and come up with something, but I think our conversations have been very interesting because it's forced me to focus on why I think that. Yeah, maybe I've always thought that, but why? And is it actually accurate?

And that's why some of the change has happened, because I've looked at it a little differently, thinking, "OK, now you're, you know, forty years away from some of it, can you step back?"

(Jacobs, 2008b)

Similarly, it also emerged that the variety of perspectives from which Anne had experienced schools was an important factor. It was clear that participation in the study made her more aware of the need to be able to view situations from multiple perspectives.

IS: Do you think a method like this reveals things that you wouldn't have picked up on otherwise?

AJ: Yes... The thing is, I didn't pay enough attention at the beginning to the fact that I was thinking as a teacher about some, as a student about some and as a parent about some.

IS: Do you see that as an important insight? That our differing viewpoints shape our experience?

AJ: That's right, and some people don't have the full range.

(Jacobs, 2008b)

Considering Anne's experience in reference to the ideas of Nonaka and Takeuchi (1995) mentioned earlier, it could be said that it made her explore her beliefs and redefine her commitments. Her shifts in understanding became knowledge, allowing her to function in a more self-authoring stance. By exploring the validity of her perspectives, and reframing her construct system in light of her current situation, she was able to make better meaning of her current context. Beyond the purely anecdotal it is harder to evaluate the degree to which this new knowledge has resulted in specific action.

Maureen Johnstone

On a general level, Maureen had an open-minded approach to the use of repertory grid technique. She asked many questions in the follow-up interviews, but was content regarding issues of credibility and trustworthiness. The following was typical of such exchanges.

IS: Are there things about the way that certain schools seem to form sheaves... that seem to make sense or link together?

MJ: Before I answer that, why are the schools placed where they are?

IS: Schools are placed where they are based on... [explanation follows]

MJ: OK, well it seems like the constructs group together naturally I think. The way they should.

(Johnstone, 2008a)

As might be expected from someone at a self-authoring stage, a recurrent theme was the distinction made between her own experiences and those of other people.

IS: What about the groupings of the schools? Does the grouping of the schools make any sense to you?

MJ: Well, in my perception perhaps, but I would never want to say [it] publicly, because I'm not making an informed decision about those things in those classrooms unless I talk to those teachers...

(Johnstone, 2008a)

Developing this further, Maureen was keenly aware of the potential distorting effects of time and distance as they related to her formative experiences. To her, the most important context was that of the here and now, and she frequently referenced all of her experiences back to her current practice. The following is illustrative:

MJ: OK, so I'd agree with that, as far as I know, but I only know *this* school intimately [my italics], and this one from a long time ago, all of these from a long time ago, so I'm not sure if that skews my perception.

(Johnstone, 2008a)

What became apparent over the course of the study was the degree to which Maureen's day-to-day practice was grounded in a state of emancipatory praxis. She was continually developing new ways of incorporating theory into practice that freed her from confining patterns.

IS: It's interesting that it's not so much... your idea of a good school isn't so much linked to necessarily your experience, as to your reframing of that [experience] constantly as you go along.

MJ: Well aren't you?

IS: ...And I don't think any of this is about saying definitively...

MJ: That's good or that's bad...

IS: ... because it's saying "what things have I experienced that have impact on what I think about what's good and bad." Like if you keep that idea of "the good school," rather than "is this school good?" it's kind of different.

MJ: Uh huh...

(Johnstone, 2008b)

Another insight revealed in the quotation above was the way in which Maureen's approach and stage of development maintained a state of open-mindedness. The permeable nature of her construct systems allowed her to frame things in relation to present practice rather than past experience. This emphasis on current practice perhaps

represents one of the key differences between self-authoring, professional construal patterns, and other, more limiting development stages and constructs. A key difference in Maureen's outlook was her reluctance to rely on or accept her past experiences of schools as a valid basis for her current context of a good school. This reveals some important insights into the relationship between developmental stages of participants, repertory grid technique and collaborative reflective practice that will be explored in the next section.

One further point worth addressing concerns the value of repertory grid technique to someone who is already functioning at a self-authoring stage of development. For other participants, I have made a case that a principal benefit of the technique lies in its potential, when allied with developmental coaching theory, for promoting movement from one stage to the next. In Maureen's instance, there was less evidence to suggest that she had made a move from self-authoring to self-aware. A possible explanation lies in the idea that moving to a self-aware stage, wherein you are able to "take multiple perspectives on multiple perspectives" (O'Connor & Lages, 2007, p. 226) may represent a less than tenable position for the average classroom teacher. Put simply, it may represent a position wherein the continuous ongoing permeability of constructs is too loose for day-to-day functioning in the hectic environment that is a school. Nonetheless, there remained a clear perceived value in participation for Maureen. Part of this was its value as a process of values clarification and validation, as the following illustrates:

MJ: ...But talking about the actual constructs I think it re-affirms what you think, and helps you to go "Yeah, that is what I think, that is my pedagogy, that is what I believe."

IS: So it's like a values clarification process?

MJ: Yeah it is. So this part to me is awesome. This part [repertory grids] I know you need for stats, but I could care less.

(Johnstone, 2008b)

Furthermore, it was clear that this function was very much what she expected and wanted from the process. She was able to see the inherent value of repertory grid technique beyond the mathematical paradigm of scoring elements.

IS: So all the actual clustering, where it places schools with similar scores together, and you've got these dendrograms. That in your mind was all part of the process itself that makes you think and clarify values.

MJ: Yeah really, I mean, what are you going to tell me, what school's score is the highest?

(Johnstone, 2008b)

Maureen noted several ways where repertory grid technique had made her more aware, and better able to articulate her tacit knowledge. She also clearly valued the degree to which the various levels of collaborative practice in the study had helped her and her colleagues to develop common language and understandings of issues.

Implications for Practice

Repertory Grid Technique and Teacher Development

In *The New Meaning of Educational Change*, Fullan (2007) highlighted the critical role of the principal in educational change (pp. 159 - 167). He referred to a recent meta-analysis conducted by Leithwood, Louis, Anderson and Wahlstrom (2004) on behalf of the Wallace Foundation, wherein a comprehensive review of existing research found three sets of core practices exercised by successful educational leaders. The first

practice involved setting directions (in the form of high performance expectations, developing shared vision and establishing group goals). The second practice was that of developing people (through individual support, modeling and intellectual/emotional stimulation). The third practice of redesigning the organization involved the development of collaborative cultures and structures and the building of productive relations with parents and the wider community (Fullan, p. 166). Close examination of these practices reveals that each of them either directly or indirectly involves an element of teacher development. As a vital component of educational change, it is worth considering the possibilities for teacher development presented by repertory grid technique.

In his earlier work, *The Principal's Role in Teacher Development*, Leithwood (1990) laid out four guidelines for fostering effective teacher development that are useful for evaluating repertory grid technique. The ideas underpinning the guidelines are also of relevance to this study. Leithwood (1990, p.86) began by outlining four foci commonly identified as part of principals' practice: 1) Administration or plant management, 2) interpersonal relations or climate, 3) program and 4) student development. Of these he identified the first two foci as *maintaining functions*. He suggested the latter two foci were less common, while at the same time noting that this type of *instructional leadership* is seen as a critical function for the improvement of student outcomes. One of his central premises was that in spite of its importance, this type of leadership is often neglected, sometimes due to perceived issues of viability, and in other cases out of a feeling of inadequacy. He identified two root causes of this problem as being an unclear vision of teacher development, and uncertainty about what strategies and approaches to use in pursuit of the aim. In an effort to address this, he began by establishing a

comprehensive framework for viewing the interrelated dimensions and stages of teacher development.

Leithwood (1990, pp.87 – 93) suggested three main areas for teacher development: professional expertise, the career cycle and psychological development. These can be represented most economically in the form of a table (see Figure 26). The most obvious of these is development of teacher expertise. Leithwood (1990, p. 87) made the distinction between classroom responsibilities (stages one to four) and the out-of-classroom/out-of-school roles of the mature teacher. He also noted that while it is a developmental model (expertise developed at prior stages is implemented in subsequent ones), this should not be used to limit or restrict teacher experiences to their developmental stage. His ideas on psychological development are presented as a synthesis of ego, moral and conceptual development theories. Parallels are apparent with the developmental coaching stages that I have used in my discussions earlier. Stage one of Leithwood's model is clearly analogous to the individualist stage, as is stage two to the community member stage. Interestingly, stages three and four of Leithwood's model present as sub-categories of developmental coaching's self authoring stage, which lends support to my earlier suggestion that the self aware state of stage five is generally too implicationally loose for a teacher's day to day functioning. Another interesting parallel regards how Leithwood (1990) also notes that as teachers develop psychologically, so too do their constructs and practice: "...the emphasis is on meaningful learning, creativity and flexibility. Being more cognitively complex themselves, teachers at this stage encourage more complex functioning in their students" (p.91).

	6 Participating in broad range of educational decisions at all levels	
	5 Contribution to the growth of colleagues' instructional expertise	5 Preparing for retirement focusing
4 Autonomous/interdependent, principled, integrated	4 Acquiring instructional expertise	4 Reaching a professional plateau
3 Conscientious, moral, conditional dependence	3 Expanding one's instructional flexibility	3 New challenges and concerns
2 Conformist, moral, negative independence	2 Becoming competent in the basic skills of instruction	2 Stabilizing: developing mature commitment
1 Self-protective, pre-moral, unilateral dependence	1 Developing survival skills	1 Launching the career
Psychological Development (Ego, Moral, Conceptual)	Development of professional expertise	Career-cycle development

Figure 26. Interrelated dimensions of teacher development (adapted from Leithwood, 1990, p. 88)

Leithwood's model for career cycle development requires some detailing of the stages presented here. Once again, his model is a synthesis of several pieces of research that, he believes "warrant tentative generalization to other contexts and teaching assignments in the modified form described." (1990, p. 92). He noted that the first stage of launching the career is typically characterized as being easy for some and painful or difficult for others. The second, or stabilizing stage is indicated by mastery of the essential teaching techniques, acceptance and integration into peer groups, greater independence and sometimes the taking on of greater responsibilities. In stage three, he suggested one of three routes is common. Teachers at this development phase typically either channel their energy into intense professional activity, focus on promotion to more specialized administrative or consultant roles, or reduce their professional commitments, sometimes even going so far as to develop alternative careers. On reaching a professional plateau in stage four, Leithwood (1990, p. 93) suggested classroom teachers generally either commit themselves to enjoying their job, or alternatively may stagnate, developing a bitter or cynical attitude that prevents further professional growth. He went on to suggest that the choices made at this point often dictate how teachers will behave in the fifth and final stage of preparing for retirement. Three patterns are typically observed, each involving a scaling back of professional interest or activity. *Positive* and *defensive* focusing described two forms of specializing in what one does best. The principal difference between the two lies in the degree of optimism and generosity of attitude expressed regarding students, colleagues and past experiences of change. A third pattern observed at this stage is that of disenchantment, wherein bitterness, especially regarding past experiences with change, is commonly expressed.

Leithwood's position in developing the model was that "An explicit, defensible conception of teacher development provides a foundation upon which principals, acting as instructional leaders, can formulate their own approach to teacher development" (1990, pp. 93 – 94). To this end he established four guidelines to be used when attempting to develop school cultures and structures that would facilitate teacher development and change: 1) Treat the Teacher as a Whole Person, 2) Establish a School Culture Based on Norms of Technical Collaboration and Professional Enquiry, 3) Consider the Incremental Nature of the Process of Development, and 4) Frame Routine Administrative Activities in Light of their Potential for Teacher Development. These guidelines provide a useful framework for evaluating the use of repertory grid technique as a tool for staff development.

Treating the teacher as a whole person.

Leithwood's first guideline is to treat the teacher as a whole person. He noted the need to "...be sensitive to all three development dimensions and seek to help teachers develop these dimensions in a parallel, interdependent fashion" (1990, p. 95). In this regard, repertory grid technique has some significant advantages. Clearly the technique allows for participants to choose elements that they believe are influential to their thinking on a given context. This whole person approach allows them to incorporate aspects of their experience that might be deemed irrelevant in other forms of professional development. Similarly, when used in conjunction with an understanding of developmental coaching, repertory grid technique has the capacity to facilitate movement from one psychological stage to the next. This is particularly important in light of

observations regarding the difficulty of moving from the community member to the self-authoring stage without the aid of external stimuli.

A further point in favour of the use of repertory grid technique lies in its intuitive novelty. Its ability to reveal layers of depth and complexity to one's thinking that were hitherto invisible allows it to become a metaphorical *reflecting pool* that makes intuitive sense to the individual and engages them in further levels of deep meaning creation. The types of subsumptive obliteration that I have documented in this study can have a far-reaching and rippling impact on many different levels of an individual's construct systems. Leithwood (1990, pp. 94 - 95) made the observation that the failure to take account of the interdependent nature of professional and psychological development may be rooted in a belief that psychological development is complete by adulthood. He cited two studies of teachers (Harvey, 1970 and Oja, 1981) that suggested that typically, teachers fall within the early to middle stages of conceptual development. These observations are borne out by my study, and as already noted, could possibly be attributed to the need for tight implicational structures in order to survive the rigours of an average teaching day. The use of repertory grid technique within a context of collaborative reflective practice has revealed a further dimension to this need: if teachers are to develop holistically, it is important that they be able to participate in activities wherein they enter a creativity cycle, progressively relaxing and tightening the implicational structures of their construct system as they seek to make meaning of their ongoing practice. The alternative is to remain in a state that is less cognitively complex, and likely results in movement towards the more negative aspects of Leithwood's career-cycle model outlined previously.

Further evaluation of repertory grid technique with reference to the career-cycle dimension provides some interesting insight as to potential uses. Leithwood (1990) suggested that in the initial career stages “Principals have an opportunity to prevent painful beginnings... with ongoing assistance in the development of classroom management skills, provision of a supportive mentor close at hand, and the avoidance of heavy-handed supervision practices” (p. 95). Engaging in a repertory grid exercise with a new teacher, using *Classrooms I am familiar with* as elements, and *Effective classroom management* as a context, could help achieve all three of the criteria mentioned, and hence assist in the development process. Similarly, at the opposite end of the career-cycle, Leithwood (1990, p. 95) noted how reaching a professional plateau could be explained by the lack of opportunities to work with others in generating shared understandings and meanings. Participation in book studies with colleagues allows teachers with greater experience to share it. The benefits are two-fold. Their experience is externally validated through being given voice, while at the same time these teachers are exposed to other ideas. They must then weigh these ideas in light of their existing practice. The addition of repertory grids allows for deeper reflection in a way that is less threatening to individuals, as they are merely looking at a representation of their own thinking on a subject. By way of example, this could be contrasted with being given a model of best practice against which to assess one’s own performance. Clearly using repertory grid technique allows more scope for the multidimensional aspects of treating the teacher as a whole person.

Establishing a school culture based on norms of technical collaboration and professional enquiry.

The second guideline provided for effective teacher development was to “Establish a school culture based on norms of technical collaboration and professional enquiry” (Leithwood, 1990, p.95). He recommended this in response to the noted tendency of teachers to stabilize in the middle stages of both professional expertise and psychological development. Contributing factors he identified include informal norms of teacher autonomy and isolation and the entrenched routines and practices that tend to persist in school cultures. These are themes with clear resonance for this study, relating right back to my earliest ruminations on the nature of change in middle years practice. Leithwood (1990, p. 96) noted the super-ordinate role of individual personal beliefs on classroom practice, and also how isolation and autonomy limit possibilities for stimulation leading to development. He raised the essential role of dissonance in challenging individuals’ perceptions, and hence promoting movement between psychological stages. Similarly, he outlined the importance of norms of collegiality and experimentation in staff development efforts. The case studies presented of John, Anne and Maureen show clear evidence of the way in which repertory grid technique was able to create levels of dissonance that, while challenging and novel, were able to be examined in an open-minded, growth oriented atmosphere. Two further recommendations made within this guideline are that principals should “take specific actions to foster norms of collaboration” and that “Principals’ teacher development strategies seem most likely to be successful within a school culture in which teachers are encouraged consciously to reflect on their own practices” (Leithwood, 1990, p. 96). As noted in my introduction to this study, such broad generalizations, while forming an important underlying message,

are limited in their value to school administrators. They need specific tools that can facilitate these forms of practice. As such a tool, repertory grid technique has the potential to fulfill the criteria outlined.

Considering the incremental nature of the process of development.

The third guideline Leithwood suggested for teacher development strategies was to bear in mind the incremental nature of the process of development. It is one “that builds on teacher’s [sic] existing stock of attitudes, knowledge and skill: they are at the same time the objects of and instruments for development” (1990, p. 98). This is one of the greatest strengths of repertory grid technique in that it acknowledges these attitudes, knowledge and skills as the very building blocks of construct formation. By creating greater meaning and structure for both explicit and more tacit knowledge, the potential for development is not only improved, but also becomes more tangible to all involved by virtue of its ability to be measured. This feature was evident throughout my study in terms of the many hidden layers of meaning and understanding that were revealed to participants by the grids. Similarly, the function of assigning number values to elements was noted as preventing ambiguity and forcing clarification of where one stood on an issue.

Framing routine administrative activities in light of their potential for teacher development.

Leithwood’s final guideline was to frame routine administrative activities in light of their potential for teacher development (1990, pp. 99-100). He made the case that in spite of the brevity, fragmentation and variety of principals’ activities in a school, developing teachers is a core activity and ways must be found to integrate this function

into the working day. Describing a variety of teacher development activities, he referred to them as *linkage strategies*. Such strategies have been seen to lead to teacher development and can be classified as *bureaucratic* or *cultural linkages*. An example of a bureaucratic linkage would be teaming of teachers, and timetabling common non-contact time to facilitate communication. A cultural linkage strategy might take the form of a collaborative curriculum mapping process within a grade level, department or school. An important defining element of such cultural linkages is the role they play in raising consciousness amongst teachers, clarifying roles and actions and developing levels of commitment.

Applying this guideline to my study provides some interesting insights. The role of repertory grid technique in providing such cultural linkages was quite clear. As I have documented, in developing broader and more permeable construct systems in participants, it raised consciousness and was capable of revealing entirely new perspectives. This led to increased creativity of solutions through the dissonance it generated, and the subsequent integrative reconciliations and obliterative subsumptions it stimulated. While I have relied on the repertory grid data for evidence of personal construct change, it is also worth noting anecdotally the role played by this study in the school as a whole. As previously noted in Chapter One, for approximately five years previous to the study, staff meetings and professional development days were used to discuss principles of effective middle years education and how to implement them at the school. In spite of this, very little action had occurred on the subject. In contrast, in the two years following our collaborative reflective practice/book study group, the school has implemented an advisory group structure/house system that continues to form a

framework for ongoing development of better middle years practice. Participants in this study have been instrumental in this process, which is indicative of the consciousness and commitment raising functions of using repertory grid technique in this way.

At first glance, the idea of developing bureaucratic linkages may seem functionally less important than developing cultural links. In analyzing the potential use of repertory grid technique, it does, however, create the imperative to consider questions of practicality. As I have mentioned already, on an intuitive level the technique had immediate visual appeal for participants. As a novel way of approaching a subject, participants were less inclined to cynicism. It must be noted however that as a technique, its mastery required a significant investment of time on the part of the researcher. While I was first shown the technique as part of my undergraduate studies in England, Devi Jankowicz's *The Easy Guide to Repertory Grids* (2004) was an invaluable guiding resource and reference for this study. Structured as a guidebook for the practical implementation of repertory grid technique, it nonetheless required approximately 40 hours of my time in reading and working through the exercises and examples in the book. This should not cause it to be immediately discounted on the grounds of impracticality. A useful parallel can be drawn with other teacher development techniques currently in use in Manitoba school divisions. One such would be *Cognitive Coaching* (Center for Cognitive Coaching, 2009) which involves attendance at up to four full days of professionally delivered workshops in order to achieve a level two certificate. In this regard, my 40-hour investment compares quite reasonably. On a related note, until recently unbeknown to me, a teaching colleague used repertory grid technique with her grade level team in my school to explore their views of what made an effective teacher.

Her training for the project was limited to engaging in a similar exercise with me as part of action research for a course she was taking in the Faculty of Education. In spite of some limitations she admitted to regarding her ability to fully analyze the results to her complete satisfaction, she suggested that both the interview technique and the *RepGrid IV* software (Gaines & Shaw, 2005) were intuitively quite easy for her to use. Such an experience, while anecdotal, suggests its use is clearly not beyond the scope of real world classroom teachers.

As some school divisions in Manitoba move away from traditional supervision models, and towards models involving professional growth, repertory grid technique could form part of a broader strategy of staff development, replete with consistent theoretical foundations such as Leithwood's *Interrelated Dimensions of Teacher Development* (1990). Realistically, for such an outcome to be achieved, the technique would clearly need to achieve a far greater level of exposure than it currently enjoys in North America.

A further observation regarding the practicality of repertory grid technique lies in how the time might be found to implement it. The issues of fragmentation and brevity that lie at the heart of a principal's job might seem to suggest that repertory grid technique is simply too time consuming. The evidence from this study can support a contrary position. Firstly, the study was conducted as action research. Participants volunteered their time gladly, as they perceived the implicit worth and value of the activity; put briefly, it is fundamental that development activities have meaning for participants. When this requirement is fulfilled, commitment increases commensurately. Secondly, there are several vital roles that repertory grid technique can accomplish for a

principal. I have noted previously that the technique is essentially a form of structured interview conducted within a specified context. In this regard it has the important function of providing focus and direction for participants. In a profession where competing demands on time are many and spontaneous, this function should not be underestimated. A principal using the technique would be well advised to carefully consider his/her key instructional leadership objectives, and plan their elements and constructs accordingly. A further advantage lies in its non-hierarchical, inquiry based style. This is consistent with Leithwood's observations on the ongoing transformations occurring in the teaching profession.

That transformation appears to begin from a perception of teaching as a routine job conducted with craft-like knowledge in isolation from other adults in a hierarchical status structure. The new perception of teaching views it as a non-routine activity drawing on a reliable body of technical knowledge and conducted in collaboration with other professional colleagues.

(Leithwood, 1990, p. 100).

Finally, as collaborative reflective practice, no part of this research involved the input of school administration personnel. The project involved teachers freely sharing their time and thoughts in an effort to develop shared norms, values and understandings. As we shall see in my final examination of thinking on leadership and educational change, this aspect of the study aligns closely with current conceptions of what might constitute exemplary practice.

School Leadership, Personal Construct Theory and Educational Change

In the previous section, I have examined the value of repertory grid technique for teacher development. In the following section I will explore some of the themes in the field of school leadership and educational change and explain how the use of repertory grid technique within a context of collaborative reflective practice, can be of value to the teaching profession in facilitating change and development of middle years educational practice.

In his book *Leading in a Culture of Change*, Fullan (2001, p. 4), suggested that in our increasingly complex world, we have seen the emergence of new paradigms for leadership. Given this, he put forward a framework for leading in such an environment. He stated five core components: developing moral purpose, understanding change processes, building relationships, creating and sharing knowledge and making coherence from complexity. He argued that there is a dynamic and reciprocal relationship between the pursuit of these functions and the personal leadership characteristics of energy, enthusiasm and hopefulness; each reinforces the other. Skillful application of these five components develops commitment amongst group members, with internal, intrinsically rewarding commitment being largely preferable to those types of external commitment that derive from management policy or practice. He suggested that as a result of these enhanced levels of commitment, the functioning of the organization improves, as a greater number of good things occur and fewer bad things happen.

I would suggest the five components put forward by Fullan have clear parallels with the findings of this study. Moral purpose concerns acting with the intention of making a positive difference in the lives of others. This aligns well with the developmental coaching context within which this study has located repertory grid

technique. Furthermore, as a process for facilitating deeper reflection and thought on subjects of importance to educators, it has clear investment in moral purpose.

On the subject of understanding change, Fullan (2001, pp. 43-46) paid particular attention to the inherent complexity of change, and to the subsequent need for meaningful change to be a process of *reculturing*. In more simple terms, this involves changing the way people do things in an organization. Such simplification however belies the nature of the changes needed. "...[I]t is a particular kind of reculturing for which we strive: one that activates and deepens moral purpose through collaborative work cultures that respect differences and constantly test and build knowledge" (p. 44). This study has shown the potential for repertory grid technique in this regard. New knowledge and understandings were created collaboratively in a respectful, non-judgmental context. Importantly, this new knowledge was constructed from the internal perspectives of the participants themselves, which has obvious implications for both moral purpose and resulting levels of commitment.

With regards to relationships, Fullan (2001, pp. 75-76) noted "... [D]evelopment of relationships among diverse elements in the organization, including those who raise objections, is essential." Organizations must embrace complexity, respect diversity of ideas, and promote discourse. Strong relationships are essential for such discourse. In discussing this, Fullan also mentions the prerequisite importance that all members of an organization have a well-developed *Emotional Quotient* (EQ) (pp. 71-75). As has been noted earlier, the collaborative reflective practices implemented in this study can be instrumental in achieving both of these objectives by allowing networks of support to develop, and trusting relationships to form. Evidence of this can be found within both the

transcripts of the interviews and the content of the mind maps synthesizing construct changes that occurred. The use of repertory grid technique allowed difficult ideas to be discussed and unraveled. Participants were able to move to higher levels of psychological development, analogous with a better- developed EQ.

The imperative for knowledge building requires some elaboration. Fullan (2001, p. 78) made the distinction between information and knowledge. He suggested that knowledge involves an added social context wherein information is explored for its meaning and value. In this study I have laid out a strong case for the way in which using repertory grids has assisted individuals in this process of personal exploration and meaning making. I have also discussed Nonaka and Takeuchi's (1995) concepts of explicit and tacit knowledge. In reference to these concepts, Fullan (2001, p. 80) noted both the inaccessibility of tacit knowledge, and the difficulties of sharing and using it throughout an organization. It is in response to these perceived problems that repertory grid technique has potential. The book study and the repertory grid methods described in this study revealed tacit knowledge to participants and facilitated its use in the broader organization. Other repertory grid techniques not used in this study, such as simple partnering and exchange grids (Jankowicz, 2004, pp. 223-230) offer further opportunities for future exploration. Such techniques allow individuals within an organization to share and reflect their constructual patterns. The following provides a pressing rationale for their use:

The sharing of tacit knowledge among multiple individuals with different backgrounds, perspectives, and motivations becomes the critical step for

organizational knowledge creation to take place. The individuals' emotions, feelings, and mental models have to be shared to build mutual trust.

(Nonaka & Takeuchi, 1995, p. 85)

Based on the evidence of this study, this quote could be followed by the statement "Effective use of repertory grids allows such sharing". I would suggest this highlights how effective the technique can be at creating knowledge for individuals and groups.

Fullan's (2001) final leadership component concerned coherence making. This involves deciding which patterns from the new knowledge created are of value, and hence worthy of retention (p. 7). On this point he made the case that the sum effect of these leadership components is greater than the individual parts. In addition, he noted the inter-relatedness of the components, and the necessity for them to be used in concert with each other as part of a total system in order that the benefits of coherency making could be realized. In discussing this symbiosis (p. 118), he noted how coherence making was supported by the inherent lateral accountability of collaborative systems and organizations. Further reinforcement could come from the sorting and comparing processes integral to knowledge making and sharing. Shared understandings and commitments to ideas and actions could provide motivation and stimulation for participants to implement those plans deemed coherent by the organization.

The question of coherence making reaches to the core of the potential value and benefits of repertory grid technique for solving some of the problems identified in the first chapter of this thesis. The inability of middle years education models to appropriately adapt to the ever more rapidly changing needs of society is deeply rooted within the numerous diverse cultures in action. In developing leadership for the necessary

process of reculturation that is required, Fullan (2001, pp. 121-134) suggested three key lessons must be learned, all of which are congruent with the use of repertory grid technique. His first was *Slow Knowing*. This could be considered analogous to wisdom, involving patient, considered response to complex, nonlinear change. He suggested further dimensions with the following:

In referring to “hard cases” (situations of complexity), Claxton says, “One needs to be able to soak up experience of complex domains – such as human relationships – through one’s pores, and to extract subtle, contingent patterns that are latent within it. And to do that one needs to be able to attend to a whole range of situations patiently without comprehension; to resist the temptation to foreclose on what experience may have to teach” (1997, p. 192).

(Fullan, 2001, p. 123)

Appropriate use of repertory grids, with careful selection of context and elements, has much to offer in this regard. It allows practitioners to move beyond the obviously explicit to explore the tacit knowledge that lies below the surface.

Fullan’s second lesson regarding the importance of *Learning in Context* could almost be considered tailor made for the use of repertory grid technique. He suggested:

Learning in the setting where you work, or learning in context, is the learning with the greatest payoff because it is more specific (customized to the situation) and because it is social (involves the group). Learning in context is developing leadership and improving the organization as you go. Such learning changes the individual and the context simultaneously.

(Fullan, 2001, p. 126)

The case studies presented in this study amply demonstrate the specific, deep and customized nature of the learning that took place. The subjects of the study, and the contexts within which they operate, engaged in a significant process of redefinition, which contributed to a stronger sense of moral purpose.

Fullan's (2001, pp. 133-134) final lesson involved the importance of developing many leaders within an organization in order to generate greater internal commitment to change. The aspects of repertory grid technique that I have linked to developmental coaching theory are particularly significant here. A necessary prerequisite for such leadership development involves personal psychological development. As indicated in my discussions, teaching conspires in a number of ways to prevent or delay individuals' development of greater mental and emotional capacities. Given Fullan's assertion that "In a culture of complexity, the chief role of leadership is to mobilize the *collective capacity* to challenge difficult circumstances" (2001, p. 136), it is in the reciprocal development of collective capacity that repertory grid technique and personal construct theory can perhaps shine the greatest light.

Implications for Theory

This study has revealed some very clear implications for personal construct theory and the use of repertory grid technique. In the first instance, I have shown that, viewed in a context of personal coaching and learning theories, the technique has the capacity to stimulate profound and important changes in an individual's construct system. In and of itself, this should come as no great surprise; personal construct psychology developed as a means for individuals to investigate their own thinking. However, when these changes can be framed within contexts such as Leithwood's (1990) interrelated dimensions of teacher development and O'Connor and Lages (2007) coaching theory, personal

construct theory has the capacity to become an extremely useful tool for promoting and facilitating both individual and organizational development. Secondly, the study demonstrated a somewhat paradoxical function of repertory grid technique. It is at the same time theoretically complex, and functionally intuitive for participants. Much as Jankowicz's *The easy guide to repertory grids* (2004) was invaluable in guiding my research, the information presented remains comparatively complex for the new reader. In order for repertory grid technique to achieve wider use and recognition in education, I would suggest the need for development of simpler, context specific guides and templates. Such tools could allow educators to gain valuable understanding of repertory grid technique while facilitating exploration of common issues such as teacher perceptions of student behaviour in a classroom, or training/professional development needs. I foresee several potential ways in which such materials might develop, such as teacher-based working groups, development of networks of educators within umbrella organizations such as the Centre for Personal Construct Psychology (<http://www.centrepcc.co.uk/index.htm>), research projects within education faculties at universities, or consultant services offered by private individuals or businesses. The development and growth of personal construct psychology to this point in time has been slow but steady, gaining new adherents around the world as individuals are exposed to the insight it can bring. I see no reasons to believe this pattern will change dramatically, but do think suggestions such as those outlined above could hasten progress, particularly in the world of education where time to think and reflect is often at a premium.

Suggestions for Further Research

The previous sections have demonstrated the considerable alignment between the use of personal construct theory and current models of good practice. Regarding where

further research efforts might best be focused, it is worthwhile to note that the methods described in this study (the repertory grid, principal components analysis and messy change grid) are but three of the many possible applications within the field of personal construct theory. Jankowicz (2004, Ch. 7 - 9) detailed several alternative formats.

Laddering techniques, for example, can be used to determine values and their hierarchies, and hence the nature of a value's resistance to change. Such a technique could be of considerable use in collaboratively developing school plans or mission statements.

Content analysis of multiple subjects' grids is dealt with in some detail by Jankowicz, and would have obvious applications for the development of competency frameworks, performance appraisal questionnaires or identification of personal development needs. An interesting aspect of this type of approach is that by engaging colleagues in creating a grid on such a subject, it would promote reflection, collaboration and validation that their ideas and experiences are actually important.

A further technique described is the use of simple partnering or an exchange grid to explore differences in personal construing. Jankowicz suggested that these approaches can be useful in team building and organizational development contexts in that they expose participants to alternate ways of construing issues. This has obvious potential for enhancing cognitive structures through greater progressive differentiations, and for creating integrative reconciliations that might facilitate the development of shared value systems amongst a staff group.

All of the ideas mentioned here mesh well with Leithwood's suggestion that "...principals look below the surface features of their schools – at how teachers are treated and what beliefs, norms, and values they share – and redesign their schools as

learning environments for teachers as well as for students” (1990, pp. 96-97). If schools are to re-culture themselves as learning organizations, it is my hope that further research into the application of personal construct theory in education takes place within the context of action research. It is apparent from this study that personal construct change is a highly complex and multi-factored process. For any methodology to achieve tactical authenticity (the point of empowerment at which changes in thinking and actions regarding practice takes place), it is vital that any research method used first establishes its ontological, educative and catalytic authenticity with educators. This is most likely to occur using an action research perspective, and would enable educators to integrate aspects of psychological development, career-cycle and professional expertise development into their conception of what it means to be a teacher. This represents one way in which the collective capacity of educators could be improved in order that they might become the change I wish to see.

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Kendall Hunt.

Appendix A: ENREB approval certificate



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APPROVAL CERTIFICATE

30 October 2006

TO: Ian Smith (Advisor J. Stapleton)
Principal Investigator

FROM: Stan Straw, Chair
Education/Nursing Research Ethics Board (ENREB)

Re: Protocol #E2006:082
"Personal Construct Change and Collaborative Reflective Practice:
An Examination of the Use of Repertory Grid Technique for Action
Research in a Manitoba Middle Years School"

Please be advised that your above-referenced protocol has received human ethics approval by the **Education/Nursing Research Ethics Board**, which is organized and operates according to the Tri-Council Policy Statement. This approval is valid for one year only.

Any significant changes of the protocol and/or informed consent form should be reported to the Human Ethics Secretariat in advance of implementation of such changes.

Please note:

- if you have funds pending human ethics approval, the auditor requires that you submit a copy of this Approval Certificate to Kathryn Bartmanovich, Research Grants & Contract Services (fax 261-0325), including the Sponsor name, before your account can be opened.
- if you have received multi-year funding for this research, responsibility lies with you to apply for and obtain Renewal Approval at the expiry of the initial one-year approval; otherwise the account will be locked.

Bringing Research to Life

**Appendix B: Letter requesting permission for participation from the school division
superintendent**

XXX XXXXX Street

Winnipeg, Manitoba
XXX XXX

November 1, 2006

XXXXXXXX XXXXX School Division
XXX XXXXXXXX XXXX
Winnipeg, Manitoba
XXX XXX

Dear Mr. XXXXXXXX,

In continuing my professional development as a teacher at High Cross School, I am currently enrolled in the Faculty of Education at the University of Manitoba, completing requirements for my Masters of Education degree in Educational Administration. As part of my thesis, I will be conducting an action research project on the subject of how collaborative reflective practice influences personal constructs of teachers. The study will require participants to take part in a book study group reading “What Every Middle School Teacher Should Know” by Trudy Knowles and Dave Brown (2000). In addition, three volunteers from the group members, will take part in a number of reflective interviews using repertory grid technique to explore their personal construct system, and how and why it changes over time.

The purpose of this letter is to request your permission to conduct this study at High Cross school. The letter of informed consent (attached) gives details of the time commitment required from participants, as well as further details on the nature and conditions of the study itself. Your signature on this form indicates that you have understood to your satisfaction the information regarding participation of your school division in the research, and agree to permit me to conduct this research. In no way does this waive your legal rights nor release the researcher, sponsors or involved institutions from their legal and professional responsibilities. Continued participation should be as informed as the initial consent, so please feel free to ask for clarification or new information throughout the study's duration.

Principal researcher: Ian Smith

(204) xxx-xxx e-mail ismith@xxxxxxxxx.ca

Thesis supervisor: Dr. John Stapleton

(204) xxx-xxxx e-mail john_stapleton@umanitoba.ca

This research has been approved by the Education/Nursing Research Ethics Board. If you have any concerns or complaints about this project you may contact the above named persons or the Human Ethics Secretariat at (204) 474 7122, or e-mail margaret_bowman@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

In the event that you approve this research, kindly sign below, and return a copy of this form to me at your earliest convenience. I will then begin the process of approaching my principal and subsequently, my fellow colleagues.

Many thanks for your consideration of this matter.

School Division Name: XXXXXX XXXXX School Division

School Name: High Cross School

Name and position of School Division administrator giving written consent:

_____ Date: _____

Researcher's Signature: _____ Date: _____

Letter of Informed Consent

Research Project Title:

Personal construct change and collaborative reflective practice: An examination of the use of repertory grid technique for action research in a Manitoba middle years school.

Researcher: Ian Smith

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Purpose of the Research

The purpose of the research is to examine how participation in collaborative reflective practice by staff in middle years schools affects an individual's psychological constructs about what makes a good school. The reflective practice activity will take the form of a book study group, reading *What Every Middle School Teacher Should Know* by Knowles and Brown (2000). Using an action research design, the study will incorporate theories of personal construct psychology to conduct structured interviews with participants. These interviews will be analyzed, and these analyses shared with participants in order to gain insight into implications for good practice, leadership and school effectiveness and the potential value, nature and processes of reflective practice in a middle school.

Procedures involving the Subject

As a participant, you will take part in five separate activities during the course of the study. These will consist of a book study group reading "What Every Middle School Teacher Should Know" by Knowles and Brown (2000). The group will meet seven times on a bi-weekly schedule for seventy-five minutes. Assigned readings will be formally discussed and reflected upon following a format negotiated by the group. Prior to the book study, you will take part in an individual repertory grid interview. This is a structured "ranking interview" lasting no more than sixty minutes, wherein you will be asked to rank a list of "schools you have known" according to a set of criteria that you will develop with the interviewer. This process will be repeated once more upon conclusion of the book study. A fourth procedure will be a thirty minute "feedback" interview to share results from the initial repertory grid interview with you. The fifth procedure will involve an "analysis" interview of no more than ninety minutes wherein participants will be asked to reflect upon differences and similarities between the pre and post activity "ranking interviews".

Recording devices to be used

Exercises in the pre and post book study “ranking interviews” will be noted on printed forms, to be retained by the interviewer for subsequent analysis. The feedback interview and final analysis interview will be audio recorded and transcribed for later use in the interviewer’s thesis.

Degree of confidentiality

In drafts and the final thesis, aliases will be used for the school and interviewees. Descriptions or quotations which may identify individuals will use pseudonyms as appropriate or will not be used at all. Participants will be provided with a copy of the final draft prior to submission in order that they may approve and authorize use of their direct quotes. Written and audio recordings will be stored in a locked filing cabinet at the author’s residence. At the conclusion of the study (July 2007), the key attributing aliases to study participants will be destroyed. All remaining stored documents will be destroyed by July 2010.

Feedback

As an action research project, the findings of the repertory grid interviews will be directly communicated to participants by the researcher in the follow-up interviews. In addition, an executive summary of the thesis will be provided to participants prior to final submission.

Credit or remuneration

Participation in the study is entirely voluntary. No remuneration or other compensation will be offered. Books bought for the study will be returned to the school library where they may be loaned out. Participants may, at their own discretion, choose to record their participation as part of their personal professional growth plan.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. In the event that you should wish to withdraw from the study having initially agreed to take part, you may contact Dr. John Stapleton, chair of my thesis committee, at the address given below. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

Principal researcher: Ian Smith (204) xxx xxxx

Supervisor: Dr. John Stapleton (204) xxx xxxx
 Faculty of Education
 University of Manitoba
 Winnipeg, Manitoba
 R3T 2N2

This research has been approved by the Education/Nursing research ethics board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122, or e-mail margaret_bowman@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

 Participant's Signature Date

 Researcher and/or Delegate's Signature Date

HES Fax No. 261-0325 Protocol # E2006:082

(Assigned by HES Admin.)

**Appendix C: Letter requesting permission for participation from the school
principal**

XXX XXXXX Street

Winnipeg, Manitoba
XXX XXX

December 6, 2006

High Cross School
XXXXXXXXXXXX Street
Winnipeg, Manitoba
XXX XXX

Dear Mr. XXXXXXXX,

I am currently enrolled in the Faculty of Education at the University of Manitoba, completing requirements for my Masters of Education degree. As part of my thesis, I will be conducting an action research project on the subject of how collaborative reflective practice influences personal constructs of teachers. The study will require participants to take part in a book study group reading “What Every Middle School Teacher Should Know” by Trudy Knowles and Dave Brown (2000). In addition, three volunteers from the group will take part in a number of reflective interviews using repertory grid technique to explore their personal construct system, and how and why it changes over time.

The intent of this letter is to request your permission to conduct this study at your school. The letter of informed consent (attached) gives details of the time commitment required from participants, as well as further details on the nature and conditions of the

study itself. Your signature on this form indicates that you have understood to your satisfaction the information regarding participation of your school in the research, and agree to permit me to conduct this research. In no way does this waive your legal rights nor release the researcher, sponsors or involved institutions from their legal and professional responsibilities. The school's continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

Principal researcher: Ian Smith

(204) xxx-xxx e-mail ismith@xxxxxxxxxx.ca

Thesis supervisor: Dr. John Stapleton

(204) xxx-xxxx e-mail john_stapleton@umanitoba.ca

This research has been approved by the Education/Nursing Research Ethics Board. If you have any concerns or complaints about this project you may contact the above named persons or the Human Ethics Secretariat at (204) 474 7122, or e-mail margaret_bowman@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

In the event that you approve this research, kindly sign below, and return a copy of this form to me at your earliest convenience. I will then begin the process of approaching my principal and subsequently, my fellow colleagues.

Many thanks for your consideration of this matter.

School Division Name: XXXXXX XXXXX School Division

School Name: High Cross School

Name and position of School Division administrator giving written consent:

_____ Date: _____

Researcher's Signature: _____ Date: _____

Letter of Informed Consent

Research Project Title:

Personal construct change and collaborative reflective practice: An examination of the use of repertory grid technique for action research in a Manitoba middle years school.

Researcher: Ian Smith

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Purpose of the Research

The purpose of the research is to examine how participation in collaborative reflective practice by staff in middle years schools affects an individual's psychological constructs about what makes a good school. The reflective practice activity will take the form of a book study group, reading *What Every Middle School Teacher Should Know* by Knowles and Brown (2000). Using an action research design, the study will incorporate theories of personal construct psychology to conduct structured interviews with participants. These interviews will be analyzed, and these analyses shared with participants in order to gain insight into implications for good practice, leadership and school effectiveness and the potential value, nature and processes of reflective practice in a middle school.

Procedures involving the Subject

As a participant, you will take part in five separate activities during the course of the study. These will consist of a book study group reading "What Every Middle School Teacher Should Know" by Knowles and Brown (2000). The group will meet seven times on a bi-weekly schedule for seventy-five minutes. Assigned readings will be formally discussed and reflected upon following a format negotiated by the group. Prior to the book study, you will take part in an individual repertory grid interview. This is a structured "ranking interview" lasting no more than sixty minutes, wherein you will be asked to rank a list of "schools you have known" according to a set of criteria that you will develop with the interviewer. This process will be repeated once more upon conclusion of the book study. A fourth procedure will be a thirty minute "feedback" interview to share results from the initial repertory grid interview with you. The fifth procedure will involve an "analysis" interview of no more than ninety minutes wherein participants will be asked to reflect upon differences and similarities between the pre and post activity "ranking interviews".

Recording devices to be used

Exercises in the pre and post book study “ranking interviews” will be noted on printed forms, to be retained by the interviewer for subsequent analysis. The feedback interview and final analysis interview will be audio recorded and transcribed for later use in the interviewer’s thesis.

Degree of confidentiality

In drafts and the final thesis, aliases will be used for the school and interviewees. Descriptions or quotations which may identify individuals will use pseudonyms as appropriate or will not be used at all. Participants will be provided with a copy of the final draft prior to submission in order that they may approve and authorize use of their direct quotes. Written and audio recordings will be stored in a locked filing cabinet at the author’s residence. At the conclusion of the study (July 2007), the key attributing aliases to study participants will be destroyed. All remaining stored documents will be destroyed by July 2010.

Feedback

As an action research project, the findings of the repertory grid interviews will be directly communicated to participants by the researcher in the follow-up interviews. In addition, an executive summary of the thesis will be provided to participants prior to final submission.

Credit or remuneration

Participation in the study is entirely voluntary. No remuneration or other compensation will be offered. Books bought for the study will be returned to the school library where they may be loaned out. Participants may, at their own discretion, choose to record their participation as part of their personal professional growth plan.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. In the event that you should wish to withdraw from the study having initially agreed to take part, you may contact Dr. John Stapleton, chair of my thesis committee, at the address given below. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

Principal researcher: Ian Smith (204) xxx xxxx
 Supervisor: Dr. John Stapleton (204) xxx xxxx
 Faculty of Education
 University of Manitoba
 Winnipeg, Manitoba
 R3T 2N2

This research has been approved by the Education/Nursing research ethics board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122, or e-mail margaret_bowman@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

 Participant's Signature Date

 Researcher and/or Delegate's Signature Date

HES Fax No. 261-0325 Protocol # E2006:082
 (Assigned by HES Admin.)

**Appendix D: Letter requesting permission for participation from teaching
colleagues**

XXX XXXXX Street
Winnipeg, Manitoba
XXX XXX

19th December, 2006

Dear colleague,

I am currently enrolled in the Faculty of Education at the University of Manitoba, completing requirements for my Masters of Education degree. As part of my thesis, I will be conducting an action research project on the subject of how collaborative reflective practice influences personal constructs of teachers. The study will require participants to take part in a book study group reading "What Every Middle School Teacher Should Know" by Trudy Knowles and Dave Brown (2000). In addition, three volunteers from these group members, will take part in a number of reflective interviews using repertory grid technique to explore their personal construct system, and how and why it changes over time. Your school division and principal have given me written permission to invite you to participate in this study. The intent of this letter is to request volunteers who are willing to take part.

The letter of informed consent (attached) gives details of the time commitment required from participants, as well as further details on the nature and conditions of the

study itself. As noted, I ask permission to audio record the interviews, and will take records and notes during our conversations. These recordings and notes will subsequently be stored in a locked filing cabinet. I do not anticipate any risk to you, and you will be informed of your right to withdraw from the study at any time. I will be using aliases during the analysis and reporting of data, as well as in the final report. I will not be using descriptions or quotations that might identify individuals. Prior to final submission, a copy of the thesis will be provided to you for review. No direct quotes from you will be used without your consent and authorization. At the conclusion of the study (July 2007), the key identifying aliases used will be destroyed. In the event that you should wish to withdraw from the study having initially agreed to take part, you may contact Dr. John Stapleton, chair of my thesis committee, at the address given below.

As an action research project, it is anticipated that the study will be of benefit to participants as a professional development activity. Included with this letter is the aforementioned letter of informed consent (attached). This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take time to read this carefully and to understand the accompanying information.

If you would be willing to accept this invitation and participate in the study, please read and sign the consent form and return it to me in the enclosed stamped self-addressed envelope. In the event that you have further questions or concerns, please contact me at:
Principal researcher: Ian Smith

(204) xxx-xxx e-mail ismith@xxxxxxxxxx.ca

Thesis supervisor: Dr. John Stapleton

(204) xxx-xxxx e-mail john_stapleton@umanitoba.ca

This research has been approved by the Education/Nursing Research Ethics Board. If you have any concerns or complaints about this project you may contact the above named persons or the Human Ethics Secretariat at (204) 474 7122, or e-mail margaret_bowman@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

In the event that you approve this research, kindly sign below, and return a copy of this form to me at your earliest convenience. I will then begin the process of approaching my principal and subsequently, my fellow colleagues.

Many thanks for your consideration of this matter.

School Division Name: XXXXXX XXXXX School Division

School Name: High Cross School

Name and position of School Division administrator giving written consent:

_____ Date: _____

Researcher's Signature: _____ Date: _____

Letter of Informed Consent

Research Project Title:

Personal construct change and collaborative reflective practice: An examination of the use of repertory grid technique for action research in a Manitoba middle years school.

Researcher: Ian Smith

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Purpose of the Research

The purpose of the research is to examine how participation in collaborative reflective practice by staff in middle years schools affects an individual's psychological constructs about what makes a good school. The reflective practice activity will take the form of a book study group, reading *What Every Middle School Teacher Should Know* by Knowles and Brown (2000). Using an action research design, the study will incorporate theories of personal construct psychology to conduct structured interviews with participants. These interviews will be analyzed, and these analyses shared with participants in order to gain insight into implications for good practice, leadership and school effectiveness and the potential value, nature and processes of reflective practice in a middle school.

Procedures involving the Subject

As a participant, you will take part in five separate activities during the course of the study. These will consist of a book study group reading “What Every Middle School Teacher Should Know” by Knowles and Brown (2000). The group will meet seven times on a bi-weekly schedule for seventy-five minutes. Assigned readings will be formally discussed and reflected upon following a format negotiated by the group. Prior to the book study, you will take part in an individual repertory grid interview. This is a structured “ranking interview” lasting no more than sixty minutes, wherein you will be asked to rank a list of “schools you have known” according to a set of criteria that you will develop with the interviewer. This process will be repeated once more upon conclusion of the book study. A fourth procedure will be a thirty minute “feedback” interview to share results from the initial repertory grid interview with you. The fifth procedure will involve an “analysis” interview of no more than ninety minutes wherein participants will be asked to reflect upon differences and similarities between the pre and post activity “ranking interviews”.

Recording devices to be used

Exercises in the pre and post book study “ranking interviews” will be noted on printed forms, to be retained by the interviewer for subsequent analysis. The feedback interview and final analysis interview will be audio recorded and transcribed for later use in the interviewer’s thesis.

Degree of confidentiality

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to study participants will be destroyed. All remaining stored documents will be destroyed by July 2010.

Feedback

As an action research project, the findings of the repertory grid interviews will be directly communicated to participants by the researcher in the follow-up interviews. In addition, an executive summary of the thesis will be provided to participants prior to final submission.

Credit or remuneration

Participation in the study is entirely voluntary. No remuneration or other compensation will be offered. Books bought for the study will be returned to the school library where they may be loaned out. Participants may, at their own discretion, choose to record their participation as part of their personal professional growth plan.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. In the event that you should wish to withdraw from the study having initially agreed to take part, you may contact Dr. John Stapleton, chair of my thesis committee, at the address given below. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

Principal researcher: Ian Smith (204) xxx xxxx

Supervisor: Dr. John Stapleton (204) xxx xxxx
Faculty of Education
University of Manitoba
Winnipeg, Manitoba
R3T 2N2

This research has been approved by the Education/Nursing research ethics board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122, or e-mail margaret_bowman@umanitoba.ca. A copy of this consent form has been given to you to keep for your records and reference.

_____	_____
Participant's Signature	Date
_____	_____
Researcher and/or Delegate's Signature	Date

HES Fax No. 261-0325 Protocol # E2006:082
(Assigned by HES Admin.)

Appendix E: Sample of script for basic repertory grid elicitation

Good afternoon. Thanks for agreeing to take part in this study, and for reading and signing all of the appropriate consent forms. Before we begin, did you have any questions or concerns about the forms you have signed?

Please be aware that you should feel free to raise questions that you might have at any point during the study. If you have no questions now, then we may continue.

The research that you have agreed to be a part of is designed to help learn more about what we consider to be the qualities and attributes of a good school. During the course of the interviews, we will also be examining what psychological constructs influence our beliefs, and how and why these constructs change over time. Over the course of the next 45 minutes or so, I will be asking you to think about all of the schools that you have experienced in your life. This could be as a student, as a parent, as a teacher candidate or as a staff member. You will be asked to consider them in terms of what factors they have in common, and what factors differentiate them. As we proceed, I will be taking notes on a special chart called a repertory grid. In our next interview (midway through our book study) I will share the analysis of the data collected today and you will be asked for your observations and thoughts. When our book study group is finished, we will again complete another repertory grid. In our final interview we will compare both grids and use them to investigate the development of our construct systems.

To begin with today, I would like you to write down on individual index cards, all of the *schools that you feel you know*. These will be schools in which you have enough significant experience (as a student, teacher candidate, parent or staff member) so as to

inform your judgement of what constitutes *a good school*. For the purposes of a repertory grid, the schools are referred to as our *elements* and our *context* is “a good school”.

Now, placing all of your element cards in front of you, choose two schools that you feel are (or were) similar within the context of a good school. What attribute do they have in common? ... (*use further questions to elicit appropriate detail, e.g. “What sort of things do you have in mind when you say that a school is [adjective]”, “Can you suggest a particular and important way of being [adjective]”, “What do you mean by [descriptive phrase]”*). Note attribute on right hand side of grid). Now, if this is one of the things that you feel contributes to a good school, choose one of the element cards (i.e. schools you know) that would represent the biggest contrast to this position. How would you describe the attributes of this contrasting school? (*Again, use further questions to elicit appropriate detail. Note attribute on left hand side of grid*). So, we have two schools that broadly reflect our construct statement on the right, and a third school that was somewhat different, and better described by the statement on the left. If you were rating the schools on a scale of one to seven, with seven indicating “most like the right hand side construct” and one meaning “most like the left hand side construct” how would you rate them? (*Note rating scores on grid*). Now, what about the other elements (schools), how would they score on the same scale? (*Note rating scores on grid*). Okay, that’s a great start. Now let’s choose two new schools from our cards and repeat the process to determine further constructs. (*Repeat process until no other constructs come to mind*).

Okay, now using the card system, we seem to have finished our construct system chart. In terms of what you think makes a good school, have we missed anything with our card process? (*If yes, elicit construct poles and give rating*). Thanks for taking time to do the interview. I will compile and analyze our results, and I look forward to sharing them with you at our next interview.

(Adapted from Jankowicz, 2004, p. 280)

Appendix I: Table E1. Anne Jacobs (second interview) repertory grid data

Display Anne Jacobs (2nd Interview)												
Knowledge of student is specific to school context	4	4	4	1	5	5	3	3	7	3	7	Staff are aware of students as individuals
Student is a number	4	5	5	1	2	4	4	5	7	4	7	Staff make students feel valued and appreciated
Limited variety of curricular/extra-curricular opportunities are available	6	3	5	5	5	4	5	6	6	3	4	Students have the opportunity to participate in activities that are meaningful to them
Academics are secondary to other concerns	7	6	6	4	7	5	5	4	6	4	6	An atmosphere exists of academic purposefulness
"One size fits all" programming	5	4	4	1	1	5	3	3	6	3	3	Programming is differentiated to meet student needs
Lack of a caring community leads to anxiety	3	4	4	2	5	5	4	3	6	3	7	Sense of community exists that leads to a feeling of security
Teaching is tied to the text	7	3	3	4	6	5	3	3	5	2	2	Teachers focus on big ideas and allow student input into the curriculum
Focus on content rather than process	6	3	4	2	4	5	3	3	6	2	6	Develops habits of mind and independent learning behaviours
School as a rudderless ship	5	4	5	4	3	4	3	2	7	2	7	Leadership and direction are evident in the school
												Keane Elem.
												Klinsmann JH
												Westshire HS
												White Hart Lane JH
												Chivers JH
												Hgh Cross
												Lineker University
												Newchester University
												Hodde Elem.
												Greaves JH
												Gascoigne H.S

Appendix K: Table G1. Maureen Johnstone (second interview) repertory grid data

Display Maureen Johnstone (2nd Interview)

An elite school with choice of clients and limited tolerance	7	4	4	7	7	Everybody fits in in spite of differences and diversity
Not enough physical activity to meet health requirements	3	7	6	4	5	Daily physical activity
Programs and teachers are outdated and stagnant	6	4	4	6	5	Teachers' programs are current and relevant
Bullying, uncaring, disrespectful environment	4	7	5	6	3	Emotionally and physically safe environment
Staff and students are disconnected and isolated from one another	2	4	7	7	2	Community connection exists between staff and students (you feel like you belong)
Few extra curricular opportunities	4	4	6	7	6	Students have lots of opportunities to get involved
Teachers "putting in time"	5	4	5	5	4	Enthusiastic, involved teachers who love their jobs
School plant is rundown	7	6	5	5	5	School is well looked after
Outdated resources	7	5	6	6	6	Up to date technology and resources

Diefenbaker HS
High Cross
Clarkson JH
Sussex Elem.
Assiniboine HS

Appendix L: John Reimer First Interview - supporting notes for concept map

1.) JR: ... but certainly what makes these schools good I think is that people make a choice to go there and they see themselves as part of a community. There is a much deeper sense of community in a school where people are coming from the same cultural background. (p. 2)

2.) JR: I guess the danger of exclusivity of private schools is a kind of “us and them”, this kind of separation. I wouldn’t say it’s a notion of superiority by any means. If anything humility and these things are really strong values in these Mennonite schools. Growing up for myself anyway made me feel a little bit insulated maybe from other things, other people, ways of thinking and so one that might really challenge a particular cultural view. So if the Mennonites are for example pacifists, you wouldn’t have a lot of people at a pacifist school saying “I think we should support the War Amps. We’re fundraising for the War Amps...” Nobody here in the school grew up thinking that war is a good idea. Homosexuality – a gay friend of mine was completely banished and there was no room for him. At [another school], on the other hand, they had gay lunch hour meetings. (pp. 6 - 7)

3.) IS: OK. The fractured staff and staff enjoyed each other’s company – the cohesion – again kind of gets flipped around and reordered there, but that is very much tied into small schools and big schools?

JR: Size of schools and maybe even just high schools in general tend to be more fractured. (p. 3)

4.) JR: The parental emphasis is more a reflection on the neighbourhood, a blue-collar neighbourhood where the families are saying “Well... you go to school and get your reading, writing and arithmetic...” (pp. 2 - 3)

5.) IS: you’ve got the continuity of leadership, the parental emphasis on academic achievement, and the consistent stand-out programs... does that start to link together in any way?

JR: The continuity of leadership I would think, and the tradition of consistent stand out [programs] thing. (p. 2)

6.) JR: Yeah – I think for the small private schools you had to fight a little harder to carve out your niche ... it seemed to me that if you didn’t fit in, if you didn’t identify with something then you kind of felt left out because everybody had something going – they were the athlete, or popular – everyone had something going. (p. 4)

7.) JR: No, I think that’s just a reflection of money. For example, if Irvine High School or Kensington get any sort of money they’ll build a great big theatre or drama centre [name for someone], which all the schools have. (p. 3)

8.) IS: On the one hand you’re saying that a diverse student population in terms of a good school is probably a positive thing. [yep] Whereas a monocultural population does not challenge students’ preferred way of thinking...In your mind that was a weakness, whereas diversity was a positive. [right] And the places that scored high – there’s almost a complete flip there. All these 2’s previously would have been on the monocultural population – you’re saying that’s not such a great thing, whereas all of the public schools – the diversity is a positive thing. [right] It’s interesting that those sort of cluster together – when you’ve got a diverse population then you program diversely. And generally

speaking in your mind you see that as a fairly positive thing... for yourself?... for the kids?... for society?...

JR: I think for everybody. Diversity is a good thing. I see it as a positive thing for sure.

(p. 3)

9.) IS: It's interesting to see how this thing about sense of community and how common sets of cultural values – when you look at them there, the correlation between them is way down.. about 60%... I thought that was an interesting juxtaposition. On the one hand you feel that a common set of cultural values help to make a good school, on the other hand you feel that that can be inhibiting or detract from the student education experience.

JR: I guess it would depend on the student, how the student chooses to... in some cases these private schools/smaller schools .. if you don't find something you can really feel pushed out. Whereas in a diverse population you can at least find somewhere you fit in or someone you can connect to. (pp. 3 - 4)

Appendix M: John Reimer Second Interview - supporting notes for concept map

I.) JR: Yeah. I didn't, I kind of thought, "If we get a little bit of actual teaching done, that would be a bonus, but if we don't ... kids will learn in spite of everything we do, or what we do... I mean I guess we have a lot of power in a lot of ways. If anything, it just made it more comforting to know that if I don't do the assessment thing how they want me to, or even at all, it's not going to make much difference. There's a lot of other things. On the other hand, realizing that the interest I should show in kids' lives, which I don't particularly have, is very significant, because that's what they need the most, and it's what I'm least willing to give, or care to do. The nurturing of the individual. I don't care to do that much. And yet that is more important than anything I know or my experience.

IS: When you say nurturing? Why that choice of words? I don't know why, it's an interesting word.

JR: "Coddling" might be a better one.

IS: Well that's the thing. It sounds like there's a resistance to that verb.

JR: Yeah, well they need so much personal kinds of things, affirmations and "good job", personal things, showing interest, "Hey, that's interesting", "good for you". No, I'm not interested and I don't care if it's good for you. You know, and that's my cynicism creeping up, or it's latent, but, I shouldn't say that it's not. I mean it's interesting in terms of "how does it affect you?" That's interesting, but what you're saying and doing in your life? I don't find it interesting. You do this, I do that. We all do these things. So I guess in that sense, the book definitely says "This is what little Jimmy in middle years is

about.” It’s about the lives of kids, and if I don’t find their lives or their thoughts particularly interesting, I dismiss it. Which, I’m realizing, means you’re not being as effective as you could be. If you were to show a little more interest, if you were to try and generate a little more actual caring for your students, you would be a more effective teacher in middle years. So, if I want to be an effective teacher, those are the areas that I need to work on. Or to put more effort into. (p. 6)

2.) JR: Yeah, broad minded and visionary. I guess I see that as being more open to different things that are happening and allow them to happen. One phrase that I heard recently is that “_____ is a micromanager.” I’ve heard people refer to them like that and I say “What is that?” And it’s when someone looks at every little detail and tries to manage them, as opposed to just let it go, it’s fine, instead of picking at all those little things... so maybe that’s “broadminded and visionary.” (p. 3)

3.) JR: No, I don’t see those as being both qualitative, I see those as being separate. Continuity would be just things that are in place for a long period of time as opposed to new people, new ideas, change, change, change, and the meddling, I mean if we had four different administrators, one for every year, and they all had the same idea of “Whatever you’re doing is fine. Carry on.” (p. 3)

4.) JR: No, I see them as different. The hand on and hands off-ness [sic] and the continuity. I wouldn’t care if they were four different principals if they all had the same

idea of where we are going to be. You know, leave everything be, if they come in and change everything, 'cause we don't really need it. (p. 3)

5.) IS: And were there any things from reading the book?

JR: Yes. It struck me that in middle years, we're dealing far more with individuals than with school, academic things. Essentially the majority of what we do depends on, is, because of the fact that these are adolescents, and once they're a bit more collected, together in their own minds, then you can put more emphasis in to school, but so much has to be tailored to the fact these are adolescents.

IS: And that relationship is going to be key.

JR: Yes... (p.5)

6.) JR: I wonder if I, now, you just said "accommodating programs effectively," I wonder if it was maybe interpretation of the question. Do we have a number of programs that are well done? Well appropriated to function? Uh, well yeah, I'd say we do a lot of different things in that school. The fact that the school isn't built so well, we don't have a multipurpose room, proper lunch facilities, uh noise, I mean the band room right across from, in the middle of classrooms, I mean it's not pleasant or well thought out, or built to accommodate... (p. 1)

Appendix N: Anne Jacobs First Interview - supporting notes for concept map

1.) AJ: But would I still think that valuing of the whole person and so on was my priority? Yes, absolutely... because I really think that one came through very clearly in what we talked about, that **it is in fact essential**... in terms of caring adults and flexibility to learn and that kind of thing is really important still. (p. 4)

2.) IS: ...are there any things in the elements on the right hand side of the chart that you see as key things or key directions that would be important to take in order to get closer to our goal (of being what we think of as a good school)?

AJ: Well, that's **really important** (valuing the whole person). I think we're moving in that direction, we need more of this (staff respecting each other), and I think we need a clearly defined sense of where we are going, to give us strength to put things into place that might be challenging for us. (p. 8)

3.) AJ: **...I think that it has to be about, first of all, how do the adults treat each other and what are their views.** I think that that's the difference when you walk into certain buildings, you have a sense of harmony sometimes, right away. You feel, just by the interactions you see. Even if people are joking around, they fundamentally respect one another, or are interested to know what does that person think about this or that, and I think that then goes to the kids too. If all the adults feel included and are recognized for their gifts, then I think the kids do too. (p. 6)

4.) AJ: I think that if staff don't behave as professionals, ... a corollary of that is that you're going to have an inconsistent commitment, because you're not behaving as a professional teacher. You don't value then, the profession in the same way that you need to if you are going to have [a purposeful learning environment]. **A purposeful learning**

environment is created by a purposeful, professional teacher, and if you don't behave that way, then the chances of creating a purposeful environment are quite minimal. (p. 2)

5.) AJ: we kind of talked about the two things here (professionalism [sic] and commitment) that one implies the other, but this one (school life separation) is pretty interesting. That to me is a little bit of an odd one in that group, and yet it's... (thinks)... Well I think if you are creating and maintaining a purposeful learning environment, you are attempting to make connections with the real world too. You're attempting to show relevance, you're attempting to mesh different disciplines, you're attempting not to have it be so separate from the rest of life experience, and a true professional I think, operates that way, you know, rather than just seeing their own little bit of information. You know I think that people who are adhering rigidly to a discipline are insecure about their knowledge of other things, and maybe themselves don't have a very well integrated sense of how things work together in the world. I mean I think professional teachers, who have a commitment to creating and maintaining a purposeful learning environment would make sure that that was not happening. (p. 5)

6.) AJ: Well this clearly goes together right? If you respect others in general you're going to create an emotionally safe environment where you're going to value people and try to help them to move towards something... (p. 6)

7.) AJ: IS: What about these two here, where you've got "limited opportunity for input" and "rigid adherence to policy and programming"?

AJ: Well, I think those two are aligned as well. I think that the more rigidity that you have, you run into the problems we talked about before, about not being able to break out of the mould and see things in a different way and try things and so on. And because of

that, often the input of staff is not welcome, because maybe that's trying to lead into the direction of change, trying to do things differently, and **if you're very rigid you're not going to look for opportunities to get people's point of view.** The same as if you're very open and looking to explore, I think for a lot of policy and programming type people, change is kind of scary, because you know, it could take us in all kinds of directions that would require further policy and a different way of programming, so I think those things are going to be pretty seriously bad when they come together, but I think they often do.

IS: And there's this one here, about priorities and senses of direction, it matches up with that professionalism and with the consultation...

AJ: Right... because I think in that one, unclear priorities, well to me, **part of being a professional** is having those priorities clear, and part of being an effective policy (maker) and programmer, is having clear priorities that one wants to achieve, and a policy as a mechanism to get there, not as a stumbling block in the way of it, and not as a convenience, like what's best for scheduling, but what do we want to achieve. What are our priorities, and whether it takes a real shake up to get something in place that's going to let them happen or not. So that still works for me. (p. 3)

8.) AJ: Well, I think that **if you have a clearly defined sense of direction, it would be because you've thought through very carefully and decided what your priorities are and then you would welcome consultation about those issues** because you're committed to making them happen, and you're secure about what you think about them and you are OK about the important issues being talked about because you're ultimate goal is to achieve them. You want to go there, and if it takes some unusual way of doing it, well good let's get on with that then. And the same with this, **if you're secure, and you have a**

direction and you can articulate it clearly and why, you don't worry about this [parental involvement], you want this in fact, the more meaningful (involvement), that they are not just welcomed in to bring cookies, but there were opportunities for them (parents) to come in and volunteer in some capacity.... I think that people who have goals, and are committed to them, want involvement from staff, they want involvement from kids, they want involvement from outside agencies, what ever it takes to achieve their objectives.

(p. 7)

9.) IS: When you look at how the schools cluster on here, ... Perryman and High Cross, it's interesting that they are so far away from the sheaves, both for the most part, in terms of good and bad.

AJ: You know why? Because they both deal with at risk populations, much more than these two. Greaves JH has a very homogeneous population. Interestingly enough, even though it's a small town, Keane did too, because there were these shared values throughout the whole place.

These two both have a lot of similarities, in the sense that when I was there, it was much like High Cross is now.... Like, we were kind of heading down the path that they were at, in the '70s, but I think that that has a lot to do with it, the type of clientele that you have and the type of problems that you're trying to deal with. You know I think that's why those two are probably very similar.

IS: So do you think that people's administrative time becomes taken up by different issues at those kind of schools, and that's why some of the people don't rigidly adhere to policy and program, because they haven't had time to put them in place in the first place?

AJ: That's part of it, and also because when they do have a program in place, these kids find a way to circumvent it, or they take up so much time with their behaviour that you can't administer the program that you do have. I think that's part of it for sure. It's interesting that they're kind of right (together), I mean that's an encouraging thing to me. In a sense, I kind of see the problems but I like the idea they're together in a way, because there were really people there that were trying to meet kids' needs.

IS: And if we were to put them over by Chivers and White Hart Lane, and have rigid programming, there would be a riot?

AJ: Absolutely....I would have expected this to be way over, but yet when I think about it, not in terms of some of the things I really value, like they didn't have the achievement levels we might have like...

IS: ... or the studious environment...

AJ: Right, but they paid the attention to the diverse needs of people, and they certainly tried to prepare them as best they could for what was out there in the real world. They weren't overly attached to saying, "Well this is science class, this is social studies class."

(pp. 7-8)

Appendix O: Anne Jacobs Second Interview - supporting notes for concept map

1.) IS: And similarly, the idea of professional roles didn't show up on the second interview.

AJ: Well, in my mind, it kind of morphs into "creating an intentionally studious and orderly environment" as well. To me, a professional teacher is someone that's... It's like any other profession, they've taken their preparation seriously, both in preparing for the career and in day to day "This is my job. I take pride in it, I try to do things this way" and **I think the idea of creating an intentionally studious environment, and including everyone and trying to meet their needs is part of professionalism...** (pp. 5 - 6)

2.) IS: Looking at the new ones that cropped up, the "Staff make students feel valued and appreciated" could be linked to "Staff are aware of student's as individuals". I did think about lumping those together...

AJ: Well, it is. **Knowing them as individuals leads to this,** because then you can say [anecdote about student]. If you don't know them, you can't value them. (pp. 6 - 7)

3.) IS: The extra-curricular opportunities was something that didn't crop up on the first one, but subsequently strikes you as being more important.

AJ: ... I think I've been realizing more and more we have certain extra-curricular activities that select out certain kids, I'm thinking about things like basketball, which I think are great, and I think that those kids that are good at that need to be valued. Heaven knows, some of them don't have other things, and I think it's really important, but I think there are a lot of kids who aren't valued. There's no room in there for them to show what they are good at. I mean I was saying to kids the other day, do you realize what a tremendous talent it is to be able to negotiate? To be able to talk with people, to be able

to be friendly with everyone, to be kind? I said if someone's an excellent waitress, that's wonderful. There's a whole skill set there...

IS: So a good school is going to have a balanced program?

AJ: Yes. It would make you feel like whatever you're good at, that you're worth something. That it's not just the kids that get A's or score the winning goal that are worth something, but that you have your own unique little set of skills that, if you do your best, can take you somewhere. (p. 7)

4.) AJ: I've been thinking about that a lot, 'cause I've seen a number of kids who are pretty sad, and the reason they're sad is that they don't see a place for themselves, and these kids, some of them can be really mean. Like, if you're a star in something, you're untouchable, but if you're not, they'll MSN you, and they'll do this and that and make you feel as miserable as they can... (p. 7)

5.) AJ: Well, you know what the truth is? I'm conflicted about it in my own mind. Sometimes I think that it's absolutely critical that people have input into the decisions that are made, and there are other times I think no, just do it already, enough consultation, you know? On the one hand I think it's important, on the other hand I think it has to be used judiciously, because there are times still where a leader has to make a decision and just do it. And then maybe after it's been done and the chips have fallen where they may, there's a renewed opportunity for further consultation about it, but I guess it reflects my own state of mind lately, where I've got to the point where I'm "For heaven's sake, just do it!" (p.5)

6.) AJ: and I think it was the reading of that book that really brought it home more than ever that we're focusing on the wrong thing. You don't need to be reading every word of a text that's written 5 years above our reading level. **We need to understand the ideas, why are we doing this and what's important here and then those that get genuinely interested in it will go on and do further reading,** don't worry about that.... A lot of the kids that I see (as a resource teacher) don't have anyone in their life telling them anything, I don't mean spiritual, but maybe philosophical. They thrive on hearing little aspects of what someone thinks it takes to lead a good life, and they don't get that anywhere. (pp. 7 - 8)

7.) AJ: ...And the book, I think, did a really good job of making me think again about the importance of relevant education, and thinking about what the purpose of what we're doing is. Why we **need to really concentrate on the big ideas** and help kids to get those and then that they can go on and fill the gaps if they want to learn more about these things. But I'd love them to go out having a basic understanding of the big broad ideas, and a love of learning... **You know, if someone is inquisitive... intellectually curious, they can learn anything.** They don't need a teacher, but they do need (to have one) at the beginning to get that happening. (p. 8)

8.) IS: ... but I guess you had a much stronger sense second time around about the nature of the 'studious environment,' or the academic purposefulness.... (AJ reviews data)

AJ: I thought it was more intentionally studious the second time, is that right?

IS: Uh huh, or just a stronger atmosphere of academic purposefulness.

AJ: ...I started thinking, “was it just... (the people or the institution)”? ... Yeah, and there was a perfect example of where some of the professors that I had, one in particular, I would definitely say, was deeply committed to his subject and to people having an appreciation of it. **And I’ve thought more about that later since we did the first one (interview). And I’ve thought about “What makes me think that that is a good experience for me?”** Well I was doing English Literature, and I did my honour degree in that after, and he was totally “there,” I don’t mean he was cramming stuff down people’s throats. He was just thoroughly enjoying himself every day, ‘cause he loved nothing more than being up there telling folks “Now what does John Milton tell us about...” He was just in his glory, and to me, I had the sense that, in those classes that I went to, **they (students) came in and they were prepared and thought “We’re here to learn this and it’s fun.”** Not in a ‘rah rah’ way, but “We’ve got some exciting things to talk about today, Paradise Lost!”...(p.5)

9.) AJ: ... and I was thinking that there are/were actually two senses of direction there, which implies there actually wasn’t a clear sense of direction there were actually two ways of the staff operating, and I didn’t experience the other one very much, but after thinking about it for quite a while, I thought “You know what, there wasn’t a clear sense of direction. There were two definite ways of operating.”

IS: And they were?

AJ: Well, one was, well let’s just say one teacher broke a student’s arm, and it was in anger. There were some people that were very punitive on staff, and I didn’t experience that. The part of the staff I was experiencing, that wasn’t the way it operated. It was very

(polarized). And so I think to myself, you know what as a teacher, would you say this place had a clear sense of direction? No, there were several.

IS: And that would affect the perception of it as a good school?

AJ: Yes, it was good for some. It was either very good or very, very poor depending...

IS: Which is interesting when you think that someone's experience of a school is so much related to what goes on within the walls of a classroom rather than the school as a whole.

AJ: And how it's related to certain individuals. Like even one teacher can make a good school out of a bad one, and a really horrible teacher can ruin the best of schools in somebody's mind, if they feel that they are harassed or unjustly treated.

IS: And so that **element of consistency in a school becomes pretty important in our ideas.**

AJ: And I've changed my mind about that for sure as a result of thinking about this. It changed my mind about the importance of everyone having, I hate to use this word after Friday, but an "inner mission" because if you've got these ringers out there, who are totally flying in the face of what we believe, then leadership has got to step in there, somebody has to be willing to step in and say "No, we don't tolerate certain things from teachers, and don't do it!" (p.4)

Appendix P: Maureen Johnstone First Interview - supporting notes for concept map

1.) IS: How do you feel, given you've spent the bulk of your teaching career at High Cross, how does that skew your sense of where the school is at? And how do you deal with that? **How do you work with that to maintain your sense of self-esteem, of pride. Because this school is a place you believe in, you have a lot of passion for it.**

MJ: I know, because it's community, it's local, and it's got a lot of problems but it has a lot of freedoms because it's ignored. It allows me to do things I couldn't do at other schools,

2.) MJ: I think I belong at this school. It's been a long time, and a big fight in the last few years because I don't want to sit still, **so I have to change and reinvent myself and my program, in order to be new, but going off on a tangent, that's our profession, you renew every fall.** Like, who else gets to do that? No one! Go in and go "I'm not going to make the same mistake, I'm going to try harder to build community in my classroom and with my colleagues... **But that's me. That's because I feel connected to this school. Like it's my school...**

3.) IS: ... Is there any one of them that you feel is more important than the others, or a couple of them that stand out?

MJ: Well yes... This, the big picture (organization) and that you're supported in your professional (decisions). Those two things would be... well... it matters a lot. This... I agree, that's why I'm here painting. If the place looks nice and is organized... **so the organization and the physical appearance, and of course feeling supported and that you have a voice. That doesn't mean getting your own way. I mean that you have a voice. That you have support.**

4.) MJ: I don't think it's a control... being organized and having things laid out isn't, I don't mean it as control, because if you're supported then you have a voice within that plan, but that plan is vocalized and revisited.

5.) IS: And for a place to be a good school for everyone, then everyone's got to feel that same amount of investment and professional autonomy, and sense of what's going on...

MJ: And freedom... so like our basic needs?

6.) IS: So when you look at the other end of that sheaf, do you think there's a link between run down places, lack of space for student population, money not available...

MJ: You could still have those things but be well organized. But, you wouldn't, so maybe there is a connection with things running willy nilly. Maybe they don't look after the air vent because they didn't see you're supposed to do that in September. Maybe there is a connection to that.

7.) MJ: ... I mean when you say that money's not available, it could be divisional... like we can't get the school painted, or get textbooks until next year because this grade needs them first, and so that's going to affect other things, as well as morale and this isn't always public knowledge [the money thing] and not that it has to be... like every single cent, but it would be good to know that, oh well, next year we're going to spend \$20,000 upgrading the school. Do you have any ideas? How can we make that money go further? It would bring on a sense of belonging and the big picture and probably utilize people properly.

8.) IS: ... do you think there are links between the programming connecting to a diverse range of students, and being supported in professional decisions?

MJ: Of course, it's the same as extra-curricular, with the programming that's the same thing, meaningful programming, and then if you keep up with practice then you're going to have better programming, that makes sense.

9.) IS: So when you think about your view of what goes on in the school, and what constitutes a kid's education, it's all of it, the total activities of the school?

MJ: Sure, chess club, whatever, cooking, science club...

IS: Saying 'hi' to someone in the hallway, is part of their educational experience?

MJ: Well it is... well of course it is. The way you treat people in the hallway is all part of your social development. That's what we're here for.

10.) MJ: Or just perhaps part of the whole thing, 'cause they were out on a limb for a long time. It doesn't really matter which team they're on, as long as they're on one. I think all kids though [need to belong] but that's my age group.

11.) MJ: ...It isn't a job, it's who you are, it defines who you are. But I think that they're not invested, perhaps they're not getting the joy out of those teaching moments. The reason we do it. The reasons you open a book, and all of a sudden that light bulb goes off for the kid, no paycheck's good enough for that. Maybe they don't feel part of the community... I have pretty high expectations of my students and teaching partners, that they do their job and they do the best they can, and that they ask questions, just like I would myself.

IS: They ask questions of themselves?

BM: Of everything, 'cause anyone who doesn't ask questions, they don't have a clue what's going on.

IS: That's interesting in itself, because asking questions is really where we try to get kids to.

BM: Well, it's life. It's lifelong learning right? And if you're too scared to ask a question, then you're not willing to take the risk to learn, and you have to be confident in a lot of things to ask that question. Whether it's directions, or "I really have to learn these things." Whatever, you don't want to look stupid, but the people who ask questions are the smart people...

IS: So in terms of trying to create a good school, trying to encourage lifelong learning amongst everybody...

BM: You have to know you can ask questions, and that's the other thing, is to know when. How your question is asked and how it's received. Sometimes when people are asked a question, or questioned, that can be a conflict.

IS: So does that tie back in to the two things we plucked out, the understanding of the big picture and being supported in your professional decisions?

BM: Of course...

Appendix Q: Maureen Johnstone Second Interview - supporting notes for concept map

1.) IS: It's interesting that it's not so much... **your idea of a good school isn't so much linked to necessarily your experience, as to your reframing of that [experience] constantly as you go along.**

MJ: Well aren't you?

2.) IS: ... looking at the stuff that emerged as new ideas, on the second interview **you said that something really important about a good school was that everyone fits in in spite of differences and diversity, versus an elite school** ...can you think of anything that brought about that as a dimension that you didn't think about first time?

MJ: Well it might have been our reading. When we were talking about our middle years kids and how **they need to feel that belonging**, and, but, I don't know that there was any event with [private school], but I think of [it] as "if you don't fit in this round hole, you go to High Cross," you know, and some of our kids left track to go to [other private school] and the one guy didn't get in and he was devastated. Like it was like a self-esteem thing, and yet...

IS: Certainly the reading part, that was a pretty big theme of what kids' needs are.

MJ: They need to be part of a group, and that group is like the number one group, even from family at that age.

3.) IS: And then, the physical activity was that one showing up...

MJ: Well because of track, and because of nutrition and because of my teaching and the healthy schools committee, getting all these facts about these kids, and talking to [PE

teacher] about all these kids who've gained so much weight in elementary and getting rid of the sugar, you know, all of that.

IS: So one of the things that triggered that was ongoing committee work, professional development work that you were doing through committee...

MJ: Being on "Healthy Schools" and changing my focus so "I'm teaching nutrition, so I'd better live it."

4.) IS: And the technology piece, it's interesting that all the places came out pretty strongly, like all the schools you're looking at you're saying "Yeah, they're pretty good."

MJ: But that's because of our mandate. I mean I'm a dinosaur with technology.

IS: But what do you think made you think of that?

MJ: Probably because we've been pushing it, and to realize that it's not going away.

The kids need to know more than just looking and searching, and then all of us having to learn, I mean how many things did we get at the start of the year, like the smart phone...

5.) IS: And when you think about the ones that disappeared, or didn't show up on the second interview, this one here about lack of space versus community accessible space to allow for diverse programming, did that seem less pressing to you second time around, or is it just chance that it didn't...

MJ: I don't know, I still think it's important.

IS: "Everyone's aware of the big picture at the school, the organization and objectives."

MJ: That's funny, because at this time of the year I'd be accepting that fact, that we had no sort of plan.

IS: So that is a temporal aspect of where you are in the school year?

MJ: I think so, because like, honestly, that didn't change much as you know, call a meeting, no one comes.

6.) MJ: Yeah, I agree, you need money for people to do what they want to do. And this is more organization of the school, where everyone knows the big picture. Umm... So this daily physical activity could almost be with extra-curricular, like it's all...

IS: Well it's like a different dimension.

MJ: Right.

IS: Because you could have extra-curricular that was like crafts and reading club.

MJ: Yeah.

7.) IS: . Are there any where you think "Yeah, it's not really as important as I thought it was." If you had to pick the ones that you were going to stick with.

MJ: Well maybe space, because we seem to manage no matter what...

IS: That's interesting, because if you think about "can you have a good school in a developing nation?"

MJ: Yeah, you might just have a tent... I still think the big picture is very important, that staff is supported, that we have money to do what we want to do, that makes a better school, you can't argue any of those.