

**MOTION LEADERSHIP TOWARDS SUSTAINABLE  
DEVELOPMENT IN CANADIAN SECONDARY SCHOOLS IN  
ALBERTA PROVINCE**

by

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## DECLARATION

I, Maria Catharina du Preez, declare that this thesis, ***Motion leadership towards sustainable development in Canadian secondary schools in Alberta Province***, has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a degree and that all the resources that I have used or quoted have been indicated and acknowledged by means of complete references.

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## ABSTRACT

The United Nations works towards sustainable development for present and future generations and therefore set their target for 2030 to attain seventeen goals, not only to help future generations meet their own needs, but also to help this present generation to be sustainable. In view of all that, one realizes that world leaders released a new, holistic paradigm shift known as systemic thinking. The new paradigm falls back to the ancient old tension between parts and the whole. Nowadays, 21<sup>st</sup> leaders reject the emphasis on the parts with its linear, rational and competitive edge. At this time in history, the new paradigm embraces a nonlinear, integrative, intuitive and holistic view of life with a moral vision at the tail end. As a result, a strong emphasis on the earth as a living being called world leaders to emphasize the moral calling of humans towards the planet. At its heart, the calling is spiritual in order to keep the planet sustaining itself at all costs. Therefore, leaders tune themselves in to sense the future—that's to say they continuously solve complex problems fast and secure with simple solutions. Forecasts of the future is derived from sensing, experience and observation of best future possibilities. Presencing means leaders envision the future and then act on what they sense. Sources of leadership vision are foresight that leads to insight and action. Before any of the above will be effective, some preparation has to be done. Preparing the mind, heart and will to open and to resist judgementalism, cynicism and fear lays the groundwork for implementing sustainable development principles. Sensing requires stillness or mindfulness; becoming quiet to wait for the right moment to act. Strong and impulsive reactions to promote the egoistic self should be quenched by asking oneself “Who am I?”, “What is my task?” .

This study examined the role of motion leadership towards sustainable development in Canadian secondary schools in Alberta Province. A qualitative investigation at three independent schools in the province of Alberta near the greater Calgary area was done. Data were gathered by means of face-to-face, in-depth interviews. Each interview lasted thirty minutes. Each school's principal, assistant-principal and a teacher have been

interviewed. Data were also gathered through document analysis from the Alberta education websites.

The findings revealed that, to a greater or lesser extent, motion leadership is present throughout. Findings showed that openness in the schools are present and that leaders do try to get rid of their blind spots. Participants were in favour of mindfulness sessions at their schools and work towards a borderless migration to spread the sustainable development principles.

The study, in the light of the new paradigm, recommends that firstly, motion leaders need to remain clear on their moral vision, namely to serve the planetary wellbeing through sustainable development principles.

Secondly, the study recommends that every motion leader has to help to turn the beam of observation on themselves in order to see that they are part of a holistic system and part of the problem the system might encounter. Thirdly, both parents and the wider community should be intricately involved in learning to become system citizens.

Key words: mindfulness, motion leadership; observation; precising; reflection; sustainable development; systemic worldview.

## CHAPTER 1: ORIENTATION TO THE STUDY

### 1.1 INTRODUCTION TO THE STUDY

Canadian education has advanced into the top tier of international rankings according to the PISA rankings. Interconnected global problems brought various countries together to combine their global powers for massive transformation in society. Problems in the world such as inequality, environmental needs, sustainable consumption, inclusive and peaceful societies, and sustainable cities need to be addressed and solved by 2030. Canadian education authorities attended the World Education Forum in 2015 and renewed their commitment to sustainable development at the Incheon Declaration. Various countries, including Canada, adopted this Agenda for Education 2030 entitled *Education 2030: Towards inclusive and equitable quality education and lifelong learning for all* (United Nations Educational, Scientific and Cultural Organisation (UNESCO), 2015; United Nations Educational, Scientific and Cultural Organisation (CMEC), 2015). At the 38<sup>th</sup> session of the General Conference at the United Nations Educational, Scientific and Cultural Organisation (UNESCO), Canada adopted and officially launched the Education 2030 Framework for Action, also to rally all countries to reach the set of global targets for sustainable development by 2030 (CMEC, 2014). In answer to this, Alberta, a Canadian province, launched the Alberta Inspiring Education initiative to implement the goals set by the Education 2030 agenda and build a sustainable future for tomorrow. Inspiring Education prepares learners to become engaged thinkers, entrepreneurial spirits and ethical citizens. This particular framework keeps the concept of sustainable development in mind in all authorised educational programmes of study (CMEC, 2014).

Therefore, the four pillars of education set forth by UNESCO (1996) are *learning to do, learning to know, learning to be* and *learning to live together* and thus provide a framework for change to inclusive, universal and transformational development for humanity, as well as to secure a peaceful and equitable planet for this generation and those to come in the future. 17 sustainable development goals and 169 targets set the direction for major transformation for the human species (UNESCO, 2015), goals that may ultimately bring the so-called deep divides in the world together. National governments support this systemic change in order to move forward by way of system-wide analysis, system-wide development and monitoring of education policies.

## 1.2 BACKGROUND TO THE STUDY

One will hardly read an educational book or attend a leadership conference who does not push for change in the same direction, namely towards a holistic system. Everyone more or less have the same pattern of saying, that the old curriculum does not fit the new worldview. Old curriculum means the emphasis is on standardized tests scores, competition between schools and in schools among students, a wide choice of schools (Bellance,2015:84) which all leads to one thing, looking after the self instead of serving the whole or common good. The question then comes next, namely “what will drive the shift?” (Bellance,2015:13). To answer this question, the United Nations (UN 1992; 2015) presents sustainable goals to all nations for them to adopt and make it their own so that change can happen on a global scale with targeted goals. With that, humanity is encouraged to become lifelong learners who possesses over global skills to make the world well and sustainable by adhering to the sustainable development goals. However, it is important to always keep in mind the real question as to the reason for push towards change.

The answer can be found in the embracement of a worldview, called the systemic worldview. A systemic worldview strives to interconnect everything on the planet and therefore future global citizens will be social innovators, creators and social entrepreneurs according to Zhao in Bellance (2015:83). Zhao furthermore stresses that the change from traditional ideas which stems from the worldview 21<sup>st</sup> century thinkers try to get rid of such as helping students to become employee minded citizens towards social entrepreneurship needs planning and a way forward. Important to know is that the meaning of entrepreneurship has changed, that entrepreneurship does not refer to someone who starts a business and profit from that. Instead, entrepreneurship refers to those who can identify a social problem and solve the social problem (Bellance,2015:88) by improving solutions to social problems. This sets the tone for the moral imperative for each person on earth. An attitude of service towards the planet means to keep it alive and well, that is what a systemic worldview requires.

Therefore, career readiness that stems from the old worldview or industrial worldview seems to be no longer an option. The reason for that is because the future points to entrepreneurship education whereby global citizens can fulfill their moral purpose, answering the call to these pressing questions, “who am I?, What is my calling?” (Scharmer, 2009). “The implementation of sustainable development is meant for all of humanity. The



reason for such drastic change is that the 21<sup>st</sup> century worldview rejects the belief that the world consists of parts or silos as seen in the mechanistic or industrialised 19<sup>th</sup> century. They believe that instead of having a fragmented world with linear structures, the conception is that mind, matter and life are unified (Capra & Luisi, 2014). The entire material world consists of interlinked patterns of relationships that are nonlinear and complex. Neglecting one part of the system will affect the whole system. This fundamental change of metaphors from seeing the world as a machine to understanding it as a network (Capra & Luisi, 2014) holds deep philosophical and practical implications for humanity. The emphasis is on network.

Since the emphasis is on a network, one can understand why 21<sup>st</sup> century believers stress the worldview that the planet is seen as one big system. According to Capra and Luisi, wherever one sees networks, one sees life. This perceptual shift is from that of objects to that of relationships (Capra & Luisi, 2014) This means networks should be open to make flow between cells possible. The networks are kept alive by a continuous flow of energy and matter. In biology (Capra & Luisi, 2014) the understanding is that ecosystems send the waste of one species to provide food for another. Systems therefore cannot be closed. The same is true for human communities, namely that communities exist of networks and flows. Capra and Luisi (2014) state that living networks continually recreate themselves on an ongoing basis. Although they keep on recreating themselves, they still keep their web-like patterns, always staying stable in one area and changing in the other. The networks have pattern, structure and process. The patterns and structure change continuously, as does the process.

Seeing that the idea of a constant process comes to the surface, according to Capra and Luisi (2014), the process of life is the dynamite of self-generation of living networks, and that is identified with the mind (cognition). No longer is the mind seen as a thing, but rather as a process. Because of this, the central insight is the interlinked relationship between the process of knowing and the process of life. The process of life entails behaviour, emotion and perception. Capra (2014:243) states,

evolution is no longer seen as a competitive struggle for existence, but rather as a cooperative dance in which creativity and the constant emergence of novelty are the driving forces.

Schools and school districts undergo multiple and major transformations because of these new conceptions of mind that are interlinked with life, which is a process of the network.

For the network to run smoothly, the international community recognises that learning is essential to reach and sustain the 17 sustainable development goals. To be actively part of a global society that is sustainable, partnerships play a crucial role in looking for solutions for the problems facing this world. Communities, business leaders and policy makers all look together for creative and innovative ways to fix the problems of the world. Therefore, a systemic approach would help to bring all sectors of the world together towards a global effort in creating a peaceful and equal society for all. Global collaboration stretches across governments, businesses, non-profit organisations, citizens and philanthropy to bring about sustainable change. The belief is that no individual nation, government department, organisation, policy or programme can face and solve the problems we face today in isolation. All need to subscribe to a common agenda and centralise infrastructure globally. A call for global partnership is extended to all learners across the world “to be life-long creative, connected and collaborative problem solvers and to be happy individuals who contribute to the common good in today’s globally interdependent world” (Fullan & Langworthy, 2014).

Through this global partnership, capacity building can become a reality by way of motion leadership. Motion leadership in education is geared towards the turning around of entire educational systems on provincial, national and international level, as well as wide communities to implement the new pedagogies (Fullan, 2010). Fullan (2010) defines motion leadership as that which causes leaders to cause positive movement around individuals, organisations and systems. “Schools and systems that foster highly collaborative practices and purposefully build social capital are places where new pedagogies thrive.” (Fullan & Langworthy, 2014:53) These goals include the global competencies for deep learning, namely citizenship, creativity, critical thinking, cooperation, communication and character. The outcome of these deep learning competencies is the wellbeing of a society wherein citizens live responsible, peaceful and happy to serve the common good.

The idea of being able to solve complex problems with simple solutions in order to survive takes front seat in today’s educational landscape. To make this reality come true, change makers need to build gigantic networks and systems. Such networks does not rely on rational thinking, logic, memorisation, seeking of cause and effect as well as previously

believed scientific knowledge that stems from the industrial era and before (Barnard, 2013). The problem is to get rid of the linear system in leadership, thinking and organisations. To build systems and make it work, Barnard (2013) is of the opinion that leaders are responsible for creating interconnected feedback loops for learning to take place. Interdependencies and interrelationships within the system cause the whole system to move forward together. Systems, networks and patterns continuously recreate themselves within the holistic system. For instance, should one part of the system stay behind when it comes to change, like the health department, and all the others renew themselves, the whole country will feel the effects thereof.

To re-culture the whole system, leadership should start from the middle with the understanding that leadership is a three-fold focus that requires constant change in the inner being of a person or organisation, the relationships that the individual forms as well as the great environment surrounding the whole. Neither the system nor the element can achieve progress without the other.

Consequently, a school can be seen as a system that optimises the relationships of its elements, for example human resources. It also interacts continuously with its environment. This system scenario of motion leadership is “a moving away from ‘dictatorial’ to ‘participative’ organizational styles” (Betts, 1992). Barnard (2013) suggests that problem solving in schools entails a hyper-responsive intervention and that schools function as systems capable of presencing (Scharmer & Kaufer, 2013), meaning to predict the occurrence of future problems and then to act upon it instantaneously. Changing the schools and districts to act from the middle of both vertical and horizontal connections renders effective means of change towards sustainable development. The motion leader acts as learning leader, change agent and system player. The ready-fire-aim approach requires a mind-set of relationships first, behaviours before beliefs, communication during implementation, and learning from the risks taken (Fullan, 2010).

Motion leadership operates from the middle and therefore poses a non-threatening approach to change, for it minimises anxiety and resistance. Many people are afraid of change (Reeves, 2009; Fullan, 2014) and will rather withdraw or fall back to their old habits of doing the things they used to do in the past, especially when change is imposed upon them from a top-down approach. The common theme is that change leads to loss – not just any loss, but a devastating and personal loss (Reeves, 2009). Find a change – any change,

no matter how essential – and one will find opposition to it. Reeves (2009) says that anxiety for change can be minimised by change agents who employs a useful strategy in “reframing” issues to put new behaviours into perspective by identifying what does not change. People are unlikely to buy into change if an “I’m here to change the entire culture” attitude from the top down is imposed upon them. Such announcements and behaviour will lead to severe resistance and change cannot take place.

Positive forward moving happens among people who trust their peers (Fullan, 2010). On the other hand, a bottom-up approach is too fractured and change can be sporadic and not coherent. For example, leading from the middle can be clusters of districts that works together. People are gently forced to be accountable to peers, to learn from peers and at the same time teach peers to raise the bar and close the gap, not only for themselves but also for students, teachers, stakeholders, the wider community and agencies at the state level (Fullan, 2014; Fullan & Quinn, 2016). Huge clusters of people working together accelerate change in a coherent way if they stay focused on what they want to achieve.

With the right policies in place, it helps to drive change in the right direction to achieve implementation of sustainable development in schools. Leaders of change create environments and strategies to give momentum to implement sustainable development across the sector. Creating environments for peer learning such as professional collaboration and student collaboration has the potential to open up the group or to invert the top-down structure upside down, inside out. In this way, cohesion of even more open networks become possible. As long as the direction is focused and accountability dealt with in the right way, together with deep learning, change towards sustainable development is set. At this point, leadership may come and go, because the flow of the dynamics of the network (Fullan & Quinn, 2016) is such that it becomes self-sustained.

Educational leadership leads humanity to a new spirituality. The belief is that the small self should be transcended into the highest Self. UNESCO, as discussed by Tawil and Cougoureux (2013:3), present moral purpose as

the world has a longing, often unexpressed, for an ideal and for values that we shall term ‘moral’. It is thus education’s noble task to encourage everyone ... to lift their minds and spirits to the plane of the universal, and, in some measure, to transcend themselves. It is no exaggeration on the Commission’s part to say that the survival of humanity depends thereon.

According to Hargreaves, Boyle and Harris (2014:3), spirituality and emotional wellness are the “beating heart of effective leadership”. The moral imperative (entrepreneurship) gives meaning to people’s lives and inspires them to act willingly as servants to the greater good. From a spiritual and emotional state, leaders act out the sustainable development goals. Their performance is remarkable, because they have learned how to use the deep learning skills and therefore uplift others around them as well. Their positive influence leads to sustainable success throughout. Clusters of networks of motion leaders inspire one another to work towards their common goal and fulfil their highest purpose. When people share their moral commitments (Fullan, 2010), they support and influence one another positively to reach higher goals.

### **1.3 THE RESEARCH PROBLEM**

The sections above lead to the main problem statement of this study, which can be phrased as a research question: What is the role of motion leadership in the implementation of sustainable development principles in secondary schools?

The main research question can now be divided into the following sub-questions:

- What is motion leadership?
- How can motion leadership support change and improve sustainable development principles in secondary schools?
- Why do motion leaders have a role to play in the implementation of sustainable development principles in schools?
- What strategies might serve as guidelines to implement sustainable development principles in secondary schools through motion leadership?

### **1.4 AIMS AND OBJECTIVES OF THE STUDY**

The aim of this study is to establish what the role of motion leadership is in the implementation of sustainable development principles in secondary schools.

The sub-aims of the study are:

- to describe and define motion leadership (to be addressed in Chapter 2 as part of the literature study);

- to explain how motion leadership can support change and improve sustainable development principles in secondary schools (to be addressed in Chapter 2 as part of the literature study),
- to determine the role of motion leaders in the implementation of sustainable development principles in secondary schools (to be established by the empirical part of the study); and
- to discuss the strategies that might serve as guidelines to implement sustainable development principles in secondary schools through motion leadership (to be discussed as main outcome of this study).

## **1.5 SIGNIFICANCE OF THE STUDY**

This study was a significant attempt to analyse the nature of motion leadership and the function of motion leadership for sustainable development. The study contributed to the enhancement of knowledge about how leaders move beyond subject mastery to increase the transformation towards an eco-awareness in schools and the wider community. The study tried to draw the essence of motion leadership from existing literature regarding systemic thinking and the role of leaders towards sustainable development. The study was beneficial in terms of identifying, analysing and explaining the literature that spans a wide field; to condense the literature to such an extent that the researcher could explore practical examples of what is demonstrated in the literature. Moreover, the findings of this study might be of value for teachers who are not well versed in the ongoing education debate to have a better understanding of the totality of what motion leadership is and how it relates to sustainable development. The researcher also believes the study may make teachers, administrators and the larger community aware of the scope of change towards sustainable development in schools and in the community. Often schools get bits and pieces as to what change looks like and their role in that. This study aims to give an overall view on the rapidly changing education scene. The findings of this study could serve as a broad framework for Alberta education to understand the awareness level in Alberta schools concerning the role that motion leadership plays towards sustainable development.

## **1.6 RESEARCH METHODOLOGY**

### **1.6.1 Research paradigm, approach and design to be followed**

The research paradigm inherent to this study is the interpretive paradigm (Willis, 2007) as a paradigm that places emphasis on the examination of the world through the point of view of the participants. In this study, the researcher utilised the interpretive paradigm by drawing on qualitative data to investigate this phenomenon. Creswell (2014:6) considers the concept paradigm to be synonymous with the term *worldview*, indicative of a broad view that the researcher has of the world and the nature of research. According to Willis (2007:8), a paradigm refers to “a comprehensive belief system, world view, or framework that guides research and practice in a field”.

Furthermore, the research paradigm reflects the philosophical conviction of the researcher and therefore impacts on all decisions made regarding the research process. An interpretive perspective is favoured, as it will provide the qualitative researcher with an ‘insider perspective’ of the inner views of the participants being studied in terms of how they experience their world. Participants will have an open-ended way of giving their views and demonstrating their actions (Henning, 2004). The interpretive paradigm was acceptable for this study as the aim of the research was to require the perceptions and experiences of participants on motion leadership and implementation of sustainable developmental principles in secondary schools.

This study comprises qualitative research. Qualitative researchers attempt to describe organisational phenomena (Willis, 2007). They apply their own subjective interpretation to understanding organisational occurrences. In qualitative research, the researcher’s attention is drawn to understanding the process and he/she does not attempt to predict the outcome. The researcher collected data from face-to-face situations by interacting with selected persons in their environments. The researcher collected data from face-to-face situations by interacting with selected persons in their environments individually. By having the interviews with each one separate, it allows the researcher to gain unique data from each participant which would be harder to get when they were in a group setting . Participants felt secure and safe during the interviews one on one.

The purpose of interviews is to determine the lived experience of others and the meaning they make of that experience (Seidman, 2013). According to Seidman (2013), interviewing participants require that researchers gain access to and make contact with participants who might be interested in participating in the study. They are typically people the researcher has never met before. Interviews as a method of inquiry helps to make meaning through language. It is deeply satisfying for those who are interested in others' experiences and stories (Seidman, 2013).

Qualitative research according to Willis (2007:239) has some advantages such as that it:

- allows the researcher to get detailed and deep data in a unique setting
- allows one to experience and portray that what we know about human behaviour in a social context
- there is no predetermined outcomes and allows the researcher to see how events unfold

However, there are some disadvantages to qualitative research also such as when collecting (Creswell, 2014:191)

- the researcher may be seen as an intruder during observations and also the researcher may not have good observing skills
- during interviews, the researcher gets only indirect information because the interviewees puts their own story forward of how they see things
- with interviews, not all participants are equally articulate and some crucial information may fall through the cracks
- at times hard to get documents because they may be protected and unavailable to private access

The researcher is in agreement with what Patton (2015:76) says, namely that research designs should be relevant and meaningful, understandable and able to produce useful results that are valid and believable. A research design describes the procedures for conducting the study, including when, from whom, and under what conditions the data will be obtained. It indicates how the research is set up, what happens to the subjects, and what methods of data collection are used. The purpose of a research design is to specify a plan



for generating empirical evidence that will be used to answer the research questions (Cresswell, 2014). Interpersonal emotions in fieldwork are essential in data collection activities because of the face-to-face interaction (McMillan & Schumacher, 2010). Henning *et al.* (2004) refer to methodology as a coherent group of methods that complement one another and that have 'a goodness of fit' to deliver data and findings that will reflect the research question and suite the research purpose. According to Patton (2015), a case study design is the basis of qualitative analysis. A case study is a condensed inquiry into a single case (Patton, 2015). The research develops an analysis of a case that is bound by time and activity (Creswell, 2014) and Willis (2007) point out that case studies are time and mind intensive. The data are also dependent on the researcher's thinking. The researcher decided to conduct an instrumental case study investigation for this study because it is the best way to answer the questions "how" and "why" (Creswell, 2014).

### **1.6.2 Population and sampling**

McMillan and Schumacher (2014:64) define the population of a study as a "group of elements or cases, whether individuals, objects or events, that conform to specific criteria and on which the researcher intends to generalise the results of the research". In this study, the population refers to all secondary schools in the City of Calgary, in the Province of Alberta in Canada.

The study utilised purposive sampling as strategy for the study, because the researcher was searching for information-rich informants or groups from which to select sub-units for a more in-depth study. Purposeful sampling as described by Patton (2015) entails a selection of information-rich cases to study in depth. From those cases, one can learn a lot about the issues around a research problem. The sampling is focused on selecting information-rich cases to answer who and why and how questions. Three secondary schools were selected because they were the most accessible for the study as well as information rich. All three schools are in the wider area of the City of Calgary in the Province of Alberta in Canada. The sample for this study consists of nine participants (one principal, one member of the management team and a teacher at each school). Three principals, three assistant-principals and three teachers were willing to participate.

### **1.6.3 Data collection instruments**

The research data collected during the research were qualitative by nature. Creswell (2009) holds the view that a qualitative enquiry involves the researcher interpreting what he/she sees, hears and understands. Therefore, qualitative data were acceptable and suitable for this study. Data were collected by means of structured and individual interviews.

The interviews stretched over a period of 30 minutes. In some cases, the researcher had to rephrase the questions when some of the participants did not share all their thoughts. With the permission of the participant, a digital recorder was used to record the interview and notes were taken to indicate key aspects that could contribute to the research. Participants in this investigation participated in 30-minute interviews to give their views on the impact of motion leaders in the implementation of sustainable development principles in Canadian schools. During this process, the participants provided ideas and solutions to the problem. The structured interview was used to evaluate the role of motion leadership in the implementation of sustainable development principles in secondary schools

Macmillan and Schumacher (2010:329) have identified five phases of data collection strategy. The researcher applied these five phases in this study.

Phase 1: Planning – The planning phase consists of identifying participants and undertakes an in-depth literature review to gain information that will be used to conduct interviews and develop questionnaires. The researcher identified the research design, data collection method(s) and type of sampling during this phase.

Phase 2: Start of data collection – at the beginning of the data collection phase the researchers established trust and developed a professional relationship with the participants by explaining the purpose of the study and processes that followed in this study.

Phase 3: Basic data collection – Interviews were conducted to gain the information needed to address the research problem.

Phase 4: End of data collection – Data collected during the interviews formulated the findings and conclusions.

Phase 5: Completion – The data collection process was completed and the necessary recommendations were made.

#### **1.6.4 Data analysis and presentation**

After collecting data, one has to do a data analysis. Willis (2007) states that one analyses data as one gathers data while thinking about writing it up. However, the bulk of data analysis comes after the gathering of data. In this study, data were recorded, transcribed and analysed to identify relevant themes. The aim of this study is to establish what the role of motion leadership is in the implementation of sustainable development principles in secondary schools the researcher will provide a literature study entailing the exposition of the main concepts.

According to Patton (2015), the analyst typically keeps reviewing the interview transcripts moving back and forth between interpretations, literature study and the transcripts. From that themes develop. These themes derived from the research questions that guided this study. A line-by-line analysis of each interview transcription was presented. Finally, concepts were formed and conclusions drawn based on the relationships, patterns and themes identified in the data.

#### **1.7 VALIDITY AND RELIABILITY OF THE STUDY**

The quality of a research study lies in its validity and reliability (Willis, 2007). Willis differentiates between internal and external validity. Internal validity asks whether the study is replicable and whether the same results as the original researcher's results will come to the fore (Willis, 2007). If not, then the study, according to Willis, is not very valuable. External validity, according to Willis (2007), asks questions about things in general. The researcher is of the opinion that this study may fall in both categories and she believes in the external and internal validity of this particular study.

Findings are presented as valid and reliable, namely that it is factual, credible and supported by empirical evidence (Patton, 2015). In order to minimise the chances of a biased approach to this study, the researcher applied the following strategies:

- Triangulation of methods: The researcher conducted structured and individual interviews with nine participants and analysed relevant documents such as circulars and minutes of meetings.

- Mechanically recorded data: The researcher recorded all individual interviews with a digital recorder and transcribed verbatim.
- Verbatim accounts: The researcher transcribed the direct quotations from the structured and individual interviews to illustrate the participants' views. Data will be kept safe in a safe place for five years.
- Participants' language: All interviews were conducted in English, the medium of instruction for all three participating schools in this study.

## **1.8 ETHICAL CONSIDERATIONS**

The researcher conducted the study in a manner that upholds the ethical requirements and procedures of the University of South-Africa. The Association of independent schools and colleges in Alberta (AISCA – see Appendix 1) referred the researcher to each individual school to get permission to conduct the study. Also, The Higher Degree and Ethics Committee of the Faculty of Education at the University of South Africa granted permission to conduct this study (See Appendix 2). Permission was obtained from each individual school (See Appendix 3), as well as from the school participants (See Appendix 4) to conduct the interviews. Participants were made aware that their participation in this study was voluntary and they could withdraw from the study without penalty. All information was treated with confidentiality in mind; data gathered from the structured and individual interviews were handled with high confidentiality. All sources used during the study to avoid plagiarism were acknowledged.

## **1.9 DELIMITATIONS OF THE STUDY**

The researcher had chosen to focus on three of the movements on the U-theory model towards sustainable development and felt it was successful. In addition, for the interviews, the questionnaire was treated as a beginning point and not ending point to stimulate conversation in the above-mentioned focused direction. The study was confined to the Calgary school districts in the Province of Alberta. The sample of the study was limited to nine educational leaders at three schools from the same school district.

## **1.10 LIMITATIONS OF THE STUDY**

Asking schools to participate was not easy. The area has plenty of postgraduate students who do research and schools are hesitant to give a go-ahead. Going through all the red tape for every school board in the area is a daunting task. There are many school boards in this area. The researcher is thankful for the schools that in the end gave permission to interview the participants on-site.

One face-to-face interview for 30 minutes with each participant did not provide enough time to get a full scope of observations from them. The study focused on many aspects surrounding motion leadership and sustainable development, which turned out to be too many to handle in depth during the interviews. The ideal situation would be to have more follow-up sessions with the participants to focus on the various topics. Though the researcher had the interviews on-site, there was not enough time to visit the classroom and observe the participants in their daily environment.

The researcher thought that participants were not familiar with the sustainable development principles and therefore did not ask them pertinently about that, partly because there was not enough time to do that. The researcher therefore had to rely on the documentation provided by Alberta education, which was fortunately available online and helped a lot to fill the gaps between the experiences of the participants and the expectations from Alberta education.

Having the interviews was rather a steep learning curve experience for the researcher. After the fourth interview, the researcher started to feel more comfortable and relaxed and she could sense that the interview itself and the recording went more smoothly towards the last interview. One of the participants withdrew from the study for personal reasons.

## **1.11 CLARIFICATION OF CONCEPTS**

### **1.11.1 Motion leadership**

Motion leadership is systemic leadership. In short, system leaders (Senge, 2006; Senge, 2012), can see they are part of the larger system. They foster reflection and observation, sensing the future and shifting the individual awareness to collective or ego awareness. Any individual can be a motion leader in any organisation, such as students, teachers,

school districts, governments, etc. A leader leads and at the same time learns. Motion leaders are able to act from the I-in-now moment (Scharmer & Kaufer, 2013) or, from what Fullan (2010) calls, the ready-fire-aim position. It is the motion leader who catalyses collective leadership, the one who positively influence others around them (Fullan, 2010). Dealing with systemic networks and real-life problems require leaders who know that systems are in a consistent process of renewal and that systems control themselves and the role of the leader is to facilitate the conditions within themselves and others to keep up with the constant change.

### **1.11.2 Sustainable development**

Traits, characteristics, values and behaviours of the individual and the team lead to a commonly owned plan for success towards sustainable development. This plan is contained in Agenda 2030 (UN, 2015), which dovetails in Agenda 21 (UN, 1992), which finds its ways into schools in Canada. The commonly owned plan is based on the idea that the world no longer consists out of parts but that the world and everything in it is interconnected with each other. Agenda 2030 and Agenda 21 cover everything about the planet and about the expected behaviour and values that all humans need to adopt to interact in this living system, the planet earth.

### **1.11.3 Deep-learning skills**

The new learning focuses on real-life problems and deep learning is a global movement (Fullan & Edwards, 2017). Fullan and Edwards (2017) describe deep learning as a melting pot of skills and attributes. There are six deep learning skills, once known as 21<sup>st</sup> century learning skills but nowadays called global competencies, namely – communication, critical thinking, collaboration, creativity, character, citizenship (Fullan & Langworthy, 2014). Because of the belief nowadays that the world is a system, each system citizen has to possess over these skills to allow continuous open flow in the network.

### **1.11.4 Mindfulness and creativity**

People should stay in a mode of awareness (Kabat-Zinn, 2012). Being in a state of openness is to be very creative and when people come to new experiences, they open up; an innate characteristic of the mind, according to Kabat-Zinn (2012). Moment-to-moment living enables one to see that we should discard old habits and believes and then we can

experiment with non-distraction and non-diversion (Kabat-Zinn, 2012). Mindfulness is a moment-by-moment non-judgmental awareness of the present moment. Mindfulness is awareness (Kabat-Zinn, 2012). Awareness is called the being; to be. This Kabat-Zinn says one can shift between being mode and doing mode when one apply your awareness. That is when one's doing comes out of being and becomes integrated and effective. The moment of "now" (Scharmer & Kaufer, 2013) holds a holding space and without thinking and pondering of past behaviours and values, the motion leader is able to act instantly from the present. Kabat-Zinn says one should awaken. The awareness or awakening is to the freeing of the self and that is possible when people live by certain standards of approach in life. Mindful individuals find happiness according to the Gross National Happiness Centre (GNH, 2016).

#### **1.11.5 Social capital**

Fullan and Edwards (2017) state that social capital demonstrates the quality of the group and at the same time uses the group to develop individuals. According to these writers, social capital is made up of collaborative cultures who are committed to learning. Social capital is only of value for educational change when clusters of people concentrate wilfully on learning of each person (human capital) in the group.

#### **1.11.6 U-theory model**

One of the leading frameworks and methods of leadership training globally. Theory U is first a learning model, namely learning from the future as it emerges (Scharmer, 2009). This model is described as a way of being, namely to connect one's self with the highest Self. The U theory demonstrates the quality of awareness, attention and consciousness from which each one in the system operates. No longer does one learn from experiences, beliefs and values of the past, but from the future as it unfolds on a continuous basis (Scharmer, 2009). Scharmer (2009) declares that when one understands from the bottom of one's being, that is the I-in-now place when the will opens up. According to the theory, humans operate from the inner place (the now).

## 1.12 PLANNING OF THE STUDY: CHAPTER OUTLINE

**Chapter 1** contains the introduction, background to the study and the motivation for the investigation. This chapter also attempts to delineate the origin and extent of the problem statement and sub-problems. The aims and objectives of the research were formulated. The methodology of the research to be undertaken and the value of the investigation were described. The main concepts were briefly described and explained.

**Chapter 2** gives a review of the literature on the rationale for change and what this change looks like, as well as the philosophy behind the change. In order to obtain change, a plan of action is needed. The researcher evaluated the present nature and scope of motion leadership in Canadian schools. A description is also given on the quality of motion leadership in Canadian schools. This chapter defines motion leadership, systemic thinking and the value of this for sustainable developmental principles.

In **Chapter 3**, the research design and the research method(s) are described. This chapter also deals with the description of the population, procedures and description of the tools and its application.

In **Chapter 4**, the collected information is conveyed, analysed and a discussion of the results provided is given. The data collected are presented and interpreted.

**Chapter 5** is the concluding chapter. In this chapter, a summary is given of the research results, whether they are supported or not, and conclusions and recommendations are made. Finally, interpretations and further suggestions for this study are also made.

## 1.13 CONCLUSION

In this chapter, an introductory background to the study was given. The motivation for the study and awareness of the problem were outlined. From the previous sections, the problem statement was proposed. The aims and the objectives of the investigation and the research method and design were discussed. Finally, the limitations to the study, the explanation of the main concepts and the organisation of the content were explained. In the next chapter, the researcher will provide a literature study entailing the exposition of the main concepts. The researcher attempted to establish the link between the role of motion leaders and the implementation of sustainable developmental principles in Canadian schools.



The next chapter will provide a review of the literature on the rationale for change and what this change looks like, as well as the philosophy behind the change. The researcher will describe and define motion leadership, systemic thinking and the value of this for sustainable developmental principles. She will also explain the present nature and scope of motion leadership in Canadian schools.

The next chapter will provide a review of the literature on the rationale for change and what this change looks like, as well as the philosophy behind the change. The researcher will describe and define motion leadership, systemic thinking and the value of this for sustainable developmental principles. She will also explain the present nature and scope of motion leadership in Canadian schools.

## CHAPTER 2: LITERATURE REVIEW

### 2.1 INTRODUCTION

The previous chapter dealt with the introduction and background of sustainable development within its systemic worldview setting, as well as how sustainable development principles can be adhered to throughout the Canadian education system in all provinces by way of motion leadership. The aim of this study is to establish what the role of motion leadership is in the implementation of sustainable development principles in secondary schools the researcher will provide a literature study entailing the exposition of the main concepts.

The chapter also outlined the preliminary literature review, research design and methodology, the significance of the study, ethical considerations, definitions of concepts and division of chapters. In this chapter, literature focusing on change towards sustainable development through motion leadership is reviewed. Motion leadership is a systemic approach for a radical transformation, which serves as an instrument to bring about innovation and change for whole-system reform in schools to bridge the great divides in society, namely ecological, social and spiritual (Scharmer & Kaufer, 2013).

On the whole, motion leadership (Fullan,2010) functions in a systemic approach (Fullan, Quinn & McEachen,2018; Capra & Luisi, 2014:) where the question of life is no longer a question of matter, meaning “what is something made of?”, but rather a question of form, namely, “what is the pattern?” (Capra & Luisi, 2014:4). This holds radical implications for leadership. Ever since the day of Plato, the view of the cosmos implied that the parts thereof are reflected in each one of them. The theory of form holds deep implications for motion leadership because the new education system is based on this idea that the individual is part of the cosmic force that moves the whole earth. Motion leaders are catalysts of a continuous movement between individualism and collectivism. Scharmer (2009) is of the opinion the earth is divided in three big parts. To fix that is to bridge the perceived great divides in society, namely ecological, social and spiritual divides. (Scharmer & Kaufer, 2013; Capra & Luisi, 2014). Change is geared to make everything on earth into one big whole and therefore makes the earth sustainable to keep going.

Senge (in Scharmer, 2009:1) says,

the future will be different from what we know now since the global economy can no longer tolerate the destructive ways of concentrating wealth in some parts of the world and others not. In a world of growing interdependence “we cannot expand the “take, make, waste” industrial model in a world where there is increasingly no “away to” throw our waste and toxins to.

To make this paradigm change possible or else to nurture the moral calling of social justice, the United Nations (UN) created a to-do-list for the world that contains all the sustainable development principles. The to-do-list is known as Agenda 21 (UN,1992) and Agenda 2030 (2015), crafted to make sure everyone, with no exception, helps keep the planet alive. One should know that this 21<sup>st</sup> century worldview, as said by Fritjof Capra himself (Pisani,2007), is a leap of faith, a belief that this is the most solid way of seeing life. The systemic worldview embraces the idea that the earth is a living system (Capra & Luisi, 2014), holistic in nature and needs to be kept alive at all times by humans. Motion leadership is not designed to function in a world where individualism is present but only in one in which collectivism flourish in a unified whole. To help make this to-do-list of the UN a reality, educational leaders implemented a plan of action to help students, the parents and wider community learn targeted skills to be functional in the network of life (Capra & Luisi, 2014). Some call this plan 21<sup>st</sup> century learning or personalized learning but mostly it’s known as the six deep learning skills or competencies. These six deep-learning global skills or competencies are saturated throughout the Alberta curriculum. All learning outcomes are based on these skills. The six global skills are packaged under what Alberta education calls, “Engaged Thinker”, “Ethical Citizen” and “Entrepreneurial Spirit” (Alberta Education, 2011).

## **2.2 THE PRESENT NATURE AND SCOPE OF MOTION LEADERSHIP TOWARDS SUSTAINABLE DEVELOPMENT IN CANADIAN SCHOOLS**

According to Fullan (2010), motion leadership is change savvy – leaders who develop leaders, multiply their influence. Fullan (2010) also says that leaders always learn and at the same time have a responsibility to teach others around them.

Sustainable development can only be implemented through relationships to contribute to the common good. Leaders that create motion in the system have a transdisciplinary vision “for seeing interrelationships rather than things, for seeing patterns of change rather than

static snapshots” (Senge, 2006:68). Fullan (2015:131) cites Rosenberg (2011:182), saying, “work that helps others, allows them to impact their world, surrounds them with idealistic and committed co-workers, and requires creativity”. The message for schools in Alberta is simple, “Students are lifelong learners inspired to pursue their aspirations and interests; achieve fulfilment and success; and contribute to communities and the world.” (Alberta Government, 2016). Alberta education implements “Moving forward with high school redesign” (Alberta Government, 2015) to engage students in their learning and teach them to create connections. One of the elements to create connections is through teacher advisory models to help strengthen positive relationships between teachers and students. Students and teachers increase learning ownership. Such personal connections with student and adults strengthen relationship building.

Collaborative inquiry promotes new thinking and behaviours and these networked learning processes work on connections and relationships or, what Katz, Earl and Jaafar (2009:40) call, “connective tissue”. Schools across Alberta that are able to do so, are in the process of revamping classrooms and school buildings for the sake of mixed engagements to create open and welcoming learning spaces. Not only do these spaces encourage interaction among different students and teachers, but also parents and other community members become engaged in these ecological habitats. According to Beard and Wilson (2013), for the new pedagogy the redesign of learning spaces are important. Beard and Wilson also state that, for experiential learning (the doing part), activities in these spaces can involve obstacles and problems to be overcome by the learners. Constant new obstacles may be introduced, all based on the learning outcomes. The Alberta High School Redesign initiative also calls for collaborative responses. The Alberta High School Redesign Initiative shifts instructional practice to increase student and teacher engagement. For instance, students and teachers participate in gallery walks where they discuss projects and through the sharing of the projects they discuss, they learn from one another.

Sustainable development written into all subject matter in Alberta education becomes mental models (Senge, 2012) to be grafted into learners’ consciousness. Dawkins coined the term *meme*. The meme means that everything one learns is copied from someone else and this movement is a process that evolves all the time. Memes are replicators, information copies with selection. To produce new memes, old memes are combined in new ways to produce new ones (Blackmore, 2013). This is learning by trial and error. To allow

sustainable development to spread, ideas and behaviours need to spread from one person to another within the culture. Extra-curricular opportunities and co-curricular opportunities get Alberta high school students involved in issues pertaining to sustainable development goals. Service learning also promotes ethical citizenship; students have the opportunity to develop their voice and agency about sustainable development issues. Currently, the Alberta curriculum makes course offerings more flexible through its High School Redesign Initiative. This increases the range of learning opportunities for students to get both on- and off-campus experience.

Understanding complex problems in the 21<sup>st</sup> century requires the presence of different people and groups who come from different angles (Goleman & Senge, 2014), who are willing to listen to themselves and to one another. “Connective tissue” of networks can be seen in social capital (Katz, Earl & Jaafar, 2009:40). To avoid bonding capital, Alberta Education aims to group different types of schools together in a district to break bonding capital and to enhance building and linking capital for the common good. For example, both Christian schools and Muslim schools and Mennonite schools are grouped under the same school board, Palliser Regional Schools in order to learn from each other and strengthen social bonds to become eventually of one mind under supervision of Alberta Education school jurisdiction (Alberta Education,2017). Such networked learning process pushes beyond standardization to result in an equal and interactive partnership among people of different believes.

### **2.3 SUSTAINABLE DEVELOPMENT PRINCIPLES**

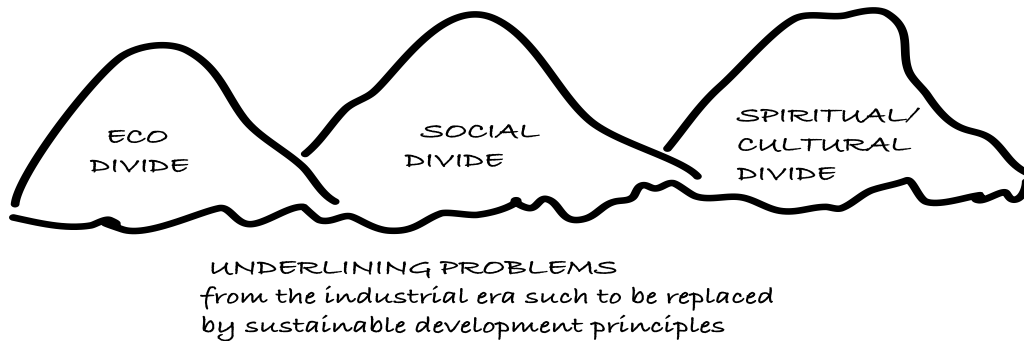
The Earth Charter Initiative – Earth Charter Around the World - is the basis for sustainable development in Canadian schools which also in 2002 was organized in Johannesburg, South Africa and the Ubuntu Alliance on Education for Sustainable Development was formed. Sustainable development principles are based on the Earth Charter Initiative under UNESCO which according to the website, is the blueprint for building a just, peaceful and sustainable world is the earth charter and the foundation of all the sustainable goals. The earth charter is an ethical guide to interlink the greater community of life and recognise that people are an interdependent part of and not a separate entity from nature. In September 2015, 196 governments agreed to an action plan to bring equality to the planet and bring peace by adopting the UN’s Sustainable Development Goals (SDGs). Officially known as *Transforming our world: the 2030 Agenda for Sustainable Development* (UN,

2015), and presents 17 goals, 169 targets and many other initiatives to be reached by 2030. Ken Robinson (UN,2015), whose global influence on inquiry learning and creativity filters to many schools worldwide, made a video lesson for the United Nations about the sustainable development goals for environmental stewardship and equality, namely the “World’s largest lesson” (United Nations,2015). The short video lesson demonstrates that all species such as animals as plants, are equal, but that the human species in particular is responsible to stop using the resources of the earth and embrace a simplistic, frugal lifestyle that makes this living system happy all the time. This lesson also shares the idea that everything on the planet is part of a wider network and the SDGs are the “to-do” list for the planet. Alberta education’s value statement correlates with the earth charter principles, namely respect for the earth, belonging to earth’s household, building democracy, and to secure and preserve earth’s resources.

Ultimately, sustainable development is utilitarian, it’s aim fixated at moving the planet from ego awareness to eco awareness. The belief is that certain actions of humanity, like using the earth’s resources for their own use, makes the rest of the planet household unhappy. Eating beef implies that someone killed cattle to do so. Food consumption is amongst the main drivers of sustainable development. The “self” is the central focus of ego-utilitarianism. Neuroscience, evolutionists and others believe the mind (Capra & Luisi, 2014) is one object among other objects and that reality is composed of objects. All objects are selves and selves are objects. According to the Santiago Theory (Capra & Luisi, 2014), developed by two neuroscientists Maturana and Varela, one brings forth the self just as one brings forth objects. The eco self is a metaphoric construct that involves choices. Choices can be made by socio-environmental conditioning; the way systems flow is the way it recreates new opportunities repeatedly. The self changes moment by moment and constantly goes through an endless process of death and rebirth (Blackmore, 2013). Evolving from egocentric consciousness to eco-centric consciousness implies that the one object moves into the other. According to neuroscientists and other new paradigm consciousness thinkers, the self becomes the Self, which does not make one part of nature, but one becomes nature and everything in the entire universe is contained within what one is.

Scharmer and Kaufer (2013) suggest that great divides from the industrialised era caused harm to the planet because of unsustainable living behaviours. The social divide leads to problems, with the negative impact of inequality and poverty on the whole system being the

norm of the day. The spiritual divide points to the great levels of anxiety and depression, accompanied by emotional problems that spread across the globe, today more than ever before.



**Figure 2.1: Three divides overcome by sustainable development to be conquered through motion leadership (Scharmer, 2009)**

The earth is no longer perceived as a resource to be abused by humans for their consumption. In fact, current wisdom believes that the earth is a living system (Capra & Luisi, 2014) and that any part thereof, regardless of the size or nature, is dependent on the well-being of the whole. Interconnected ties are crucial in keeping the system alive.

According to Capra and Luisi (2014), new emerging science opens the pathway for a paradigm shift of metaphors. The shift is from a mechanistic to a holistic worldview, from an understanding of the world as an ecosystem. Ultimately, the belief is that the world is a holistic system that consists of networks and relationships.

The notion of an organic, living, and spiritual universe was replaced by the idea that the world is like a machine. The world machine became the dominant metaphor of the modern era until the late twentieth century when it began to be replaced by the metaphor of the network. (Capra & Luisi, 2014:7)

According to Scharmer (2009), the three big divides caused by the industrial world (Capra & Luisi, 2014) are disconnects between:

- **self and nature** (too many people on planet, overuse of planet's resources, man becomes a nuisance (according to geoscientist Paul Martin) ,
- **self and other** (resulting in two societies, the injustice of the wealthy and poor.

- **Self and self** (self and the highest Self that is a spiritual awakening into the highest form of Self – small self that leads to depression, anxiety, suicide, wars and murder)

To fix these divides, three main inversions are needed (Scharmer & Kaufer, 2013), namely:

**Personal inversion** – From Me to We awareness

**Relational inversion** – From Ego to Eco awareness

**Institutional inversion** – Towards Ecosystem awareness

Sustainable development

All definitions of sustainable development require that we see the world as a system – a system that connects space, and a system that connects time.

Hargreaves and Fink (2006) define sustainability as follows:

The idea of sustainability is inherently moral. Sustainable educational leadership and improvement preserves and develops deep learning for all that spreads and lasts, in ways that do no harm to and indeed create positive benefit for others around us, now and in the future.

Fullan (2015) is of the opinion that for sustainable change to take place, relationships matter because leaders cannot get results on their own (Kirtman, 2014). All systems depend on continuous feedback loops (Capra & Luisi, 2014) with open relationships in the form of linking social capital to feed the system with sustainable development principles and keep the planet alive

## **2.4 SYSTEMIC THINKING**

Systems are nested, self-generating and open, and have cognitive operations (Capra & Luisi, 2014). Systems thinking is contextual, since all systems are part of larger systems. Systemic thinkers believe in “process philosophy”; that reality exists of primary “events”; all are interdependent and interlocked with one another. One of the key ideas of systemic thinking is that relations are more important than objects. Sustainable development seeks to interconnect people and the planet through partnerships to achieve peace and prosperity (wellness). The ideal is to intermingle humanity, meaning all people in and among countries and the environment by 2030 for an equal, prosperous and peaceful planet. Learning to see



systems rather than isolated silos (Barnard, 2013) is key to sustainable development. A living system is self-generating and renews itself continuously. It operates far from equilibrium and is always open. Continuous energy and matter flow through the system to sustain life and produce waste. Some systems use the waste of others as the cycle continually emerges. Open systems are nonlinear and have a huge amount of interconnected feedback loops to help the system sustain and balance itself (Capra & Luisi, 2014). From time to time hiccups in the system occur whereby the system reorganises itself into new, creative ways. The system discards the old and embraces new ways of doing. Nonlinearity of living networks involves partnerships and cooperation from all sides.

Education is no longer a push from the top down or a grassroots-up system.

Change in education takes place right in the middle. According to Kirtman and Fullan, (2016),

The middle, when it is focused and well led, can come up with insightful ideas, generate widespread buy-in and create stronger accountability with transparent data and better results. The middle does not operate on its own. It still relates upward to policy priorities and performance, as well as downward in collaboration with its schools.

Systems thinking is based on both the growth of a system as well as the stability, finding the advantage needed to achieve the most constructive change (Senge, 2012). According to Senge, all doing is knowing and knowing is doing. Doing does not mainly refer to facts and theories, but is rather a reference to work with information where the consciousness takes over. Systems thinking typically embraces action-based experiences and the importance of the use of language such as dialogue and the spirit of inquiry. Goleman and Senge (2014) describe systemic thinking in terms of:

- **Focusing on the self** – focus on interior world, deep learning skills that entails emotional intelligence, each one connects with its sense of purpose, “What is my calling?”; understanding own feelings and what to do about these feelings. Inner focus helps to focus on the here and now, to control oneself. This happens through Mindfulness.
- **Tuning in to other people** – Building tight relationships. (social capital)

- **Understand the world at large** – how eco-systems interact. How systems create webs of interdependence that unfolds continuously, creating new patterns all the time.

Goleman and Senge (2014) state,

the more we understand the process of developing systems intelligence, the more we see the close connections between understanding self, understanding other, and understanding the larger systems to which we all belong.

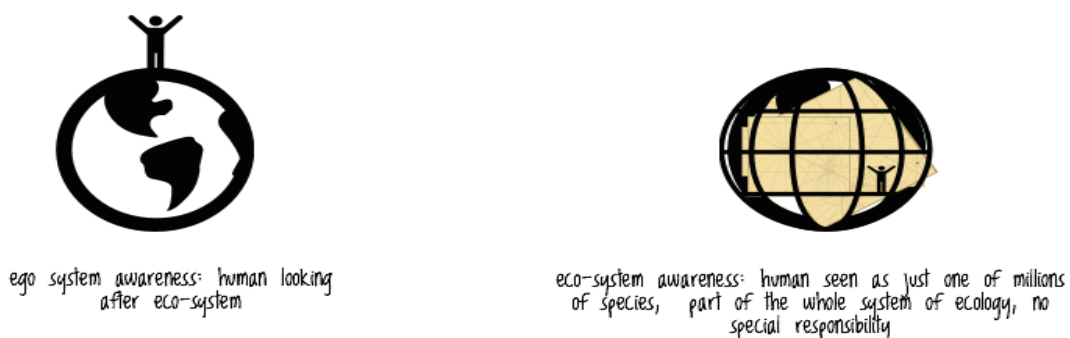
Barnard (2013) suggests that schools are stuck in the old-school, hierarchical form. Barnard believes that schools should be built from the inside out, forming systems on a horizontal level. The linear system, unlike patterns in systems, does not give a full picture of arising problems all at once. Linear systems view problems in parts and fix them one at a time. In contrast to linear systems, systemic or holistic systems view the whole picture from afar and then fix problems as a whole by fixing certain nodes on the system whereby the whole pattern of the system changes. Barnard (2013) postulates that the leader needs the necessary skills to orchestrate chaos as well as to create interconnected feedback loops. By working with the whole, that is to say, thinking in terms of relationships, networks and patterns, context and connectedness, it is easier to solve complex problems in a holistic way.

#### **2.4.1 Systemic thinking towards eco-system awareness**

The world as system is believed to be one where deep relationships are formed in order to act instantly from an eco- (not ego)-system awareness. The term *ecological* refers to a philosophy from 1970 by Arne Naess, who drew a distinction between “shallow” and “deep” ecology (Capra & Luisi, 2014). Contemporary environmentalists use this term to refer to shallow ecology as human-centred. Shallow ecology views humans as outside the realm of nature, who only “use” and look after nature from their own sphere. However, the holistic worldview of today believes that, according to Naess’s theory, “deep ecology” Capra and Luisi (2014:12) sees no separation of species. Deep ecology views the whole as a network, consisting of the sum total wherein all are interconnected and dependent on one another. Humans are no longer seen as those who dominate nature (ego aware), but they are part

of the whole network of other species. “In a social network, people are empowered by being connected to the network or system.” (Capra & Luisi, 2014:14)

Earth-centred networks (deep ecology) go beyond humanism and demand from humans to recognise the value of nonhuman life (eco-aware). Evolution seeks a balance between the ego and eco-system, between self-assertiveness and integration – positive movement from me to we awareness. The illustration below illustrates the difference between the worldview of 20<sup>th</sup>-century industrialised mind-set that is egocentric in comparison with the 21<sup>st</sup>-century ecological mind-set and what radical change of mind-set is required from every individual. The difference between shallow and deep ecology is clear. Humans in the first figure (Figure 2.1) are outside the whole-earth system, looking after nature. In Figure 2.2, humans see themselves as part of the whole network of the living earth (Capra & Luisi, 2014:14). Capra and Steindl-Rast (1991) believe all species are equal; that one cannot speak of a “higher” or “lower” species – for instance, that both insects and people are very complex and each species has its own special characteristics.



**Figure 2.2: Humans see themselves as part of the whole network of the living earth (Capra & Luisi, 2014:14)**

## **2.4.2 Building relationships**

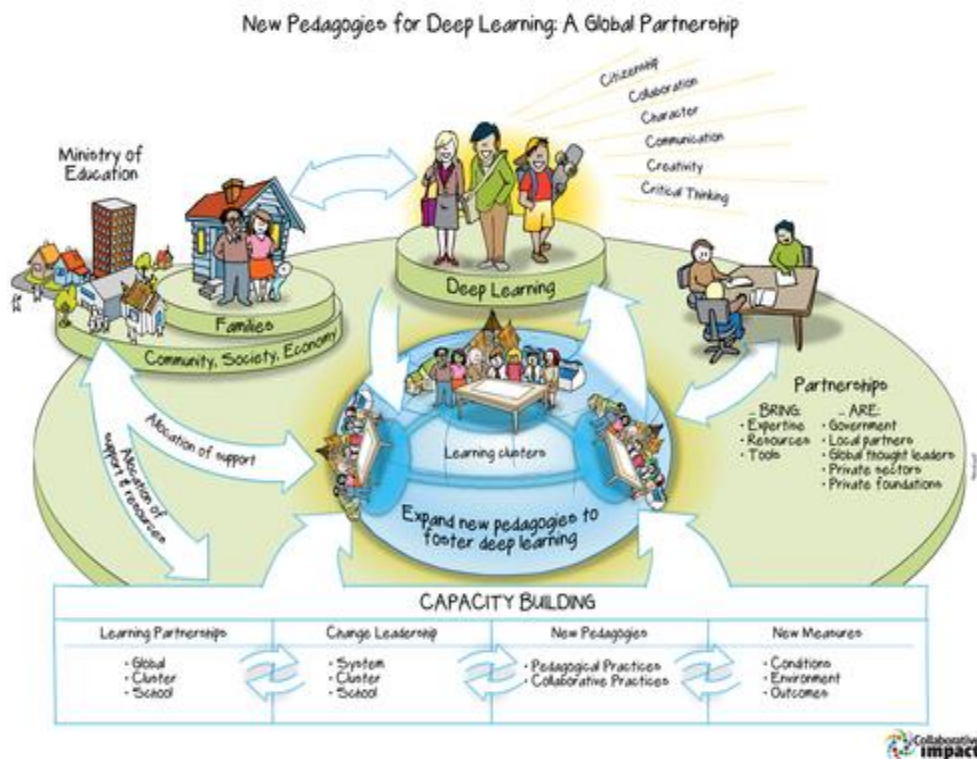
The connectivity of the engagement and collaboration between peers and peers, between the school and community, parents and teachers, etc. sit at the heart and centre of motion leadership. Hargreaves and Shirley (2009) state that, to collaborate purposes that are clear and focused as well as positive relationships makes the system empowered and gives people an inspiring and inclusive vision, responsibility and mindful learning. The point is to build relationships among all peers, the self and self, and the self and eco-

system. Communication in the system happens through constant feedback loops. No one is able to carry the sustainable development goals out on his or her own. That is why one needs to bring everyone together, building bridges so everyone can work together. Looking at the 17 goals or problems of the world, one often hears they are very complex problems and not simple problems like those that the world has seen in the past. The UN asks people to understand what they can do and then reach out to others who do not do what they do, so that everyone can work in collaboration. Everyone should be engaged in working together on the sustainable development problems. As the executive director for the UN's Environmental Stewardship (FES) said, one should engage everyone and leave no one behind, since each one has their unique experiences and differences to work towards sustainable development solutions, namely to develop an inclusive, profitable, peaceful and prosperous society. To do this, there needs to be a shift of perception – the perception moves from the parts to the whole.

The fact that the basic pattern of life is a network means that the relationships among the members of an ecological community are nonlinear, involving multiple feedback loops. Linear chains of cause and effect exist very rarely in ecosystems. Thus, a disturbance will not be limited to a single effect, but is likely to spread out in ever-widening patterns. It may even be amplified by interdependent feedback loops, which may completely obscure the original source of the disturbance. The cyclical nature of ecological processes is an important principle of ecology. The ecosystem's feedback loops are the pathways along which nutrients are continually recycled. Being open systems, all organisms in an ecosystem produce wastes, but what is waste for one species is food for another, so that the ecosystem as a whole remains without solid waste (Capra & Luisi, 2014:354).

Furthermore, Goleman and Senge (2014) say that by rethinking learners' cognitive development and potential, one comes to realise that everything in the universe is interdependent. Real thinking to them involves an understanding of interdependence of relations between self, others and nature. Through these interdependent units, motion is created to change the whole system on an enormous scale. Goleman and Senge (2014) also refer to the spiral of cognitive abilities, interwoven by the spiral of emotional abilities, another spiral of spiritual abilities and energetic abilities interconnected in each individual self that has to be reshaped in schools. (See Figure 2.3 below.) Individuals, communities

and institutions on national and international level become interconnected networks of evolving motion from their current to future possibilities.



**Figure 2.3: Transformation map: New Pedagogies for Deep Learning. Collaborative Impact. (New Pedagogies for deep Learning, 2015)**

Principals are spending more and more time on instruction, but it is not time well spent, in that it does not yield widespread results. To increase impact, principals should use their time differently. They should direct their energies to developing the group. This does not exclude the role of selecting and cultivating individuals, but it places that activity within the context of creating a collective culture of efficacy. Hierarchical leadership can never influence the masses on any scale, but purposeful peers can have this effect (Fullan, 2014, Chapter 3).

Horizontal systems thinking for change in education demolishes the old-style, top-down management known to destroy motivation and capacity building. In its place enters the systemic thinking model, a holistic approach to leadership. School leaders that want to create motion leadership engage in relationships outside the school so that it can increase learning inside the school (Fullan, 2014). Fullan (2014:99) says, “Engage externally in order to buttress your work of building internal capacity (human and social capital).”

Goleman and Senge (2014) utter the hope that the next generation will be shaped by what they call “the triple focus” of concentrating on the inner self, the outer self (relationships) and the network (ecosystem) they are in. Should each leader be able to connect to their highest self, to others around them and the exterior ecosystem, the whole system reform will be an emerging system for future generations to operate in. Motion leadership (Fullan, 2014) is characterised by its horizontal workings across networks to form relations with the self, others and nature (world at large) and deep learning to create motion for whole system change (Goleman & Senge, 2014). Networks are a powerful tool for educational reform and it is through networks that a process of cultural and behavioural change takes place, embedding reform in way people act in a system (Katz, Earl & Jaafar, 2009). Katz *et al.* flesh out this statement by saying that these networks can create new behaviours, leading to micro-, meso- and macro-level reform.

#### **2.4.3 Develop the individual: Entrepreneurship, engagement and innovation**

As a starter for motion leadership is to bring each one on a lifelong learning path where they create themselves continuously. According to evolution theory, an individual needs to be constantly in flux in order to create innovation for the sake of the survival of the planet. For the individual to be in service to the whole, it is important that each individual be supported by the community outside the school walls to develop emotionally, intellectually, socially and spiritually (Alberta government, 2010). Motion takes off in what Scharmer (2009) calls a state of sensing. Inquiry-based education paves the way from a me-to-we awareness. Sensing awakens the collective brain. Through inquiry, learners, teachers, administrative staff and support staff constantly observe and reflect one another’s behaviours and values around project-based tasks. For instance, when faced with someone who disagrees, to go from me to we awareness, a person might say, if a talented person like yourself disagrees with me, there must be something I can learn from you, since you have a vision that I need to look at. Sensing takes place when a leader is motivated intrinsically. Such new transformation inside the leader can happen through social intelligence programmes such as mindfulness and other meditation practices after the observation and reflection stage. Memes, that is, the basis of human culture and self-replicating “life forms”, spread themselves through human consciousness, and are passed on by feedback learning; by trial and error (Blackmore, 2013) and that is what brings social entrepreneurship in motion. As said before, the entrepreneurship in a systemic worldview

and in a systemic world is always meant for social issues. The Earth Charter written by the United Nations, who helps shape the new curriculum in Alberta, time and again stipulates that innovation, creativity and entrepreneurship is always focused on social motivation and social impact.

Social innovators, entrepreneurs and innovators in a systemic world moves from their individualistic small self to their highest spiritual Self. When ever Alberta education refers to ethical citizens, that always refers to spiritual citizens and is in line with the sustainable development principles set out in the Earth Charter, Agenda 21 and Agenda 2030 (UN,1992; 2015). The ethical or spiritual highest Self (Scharmer & Kaufer,2013) refers to what the Earth Charter (Earth Charter,2012) says:

*In the midst of our magnificent diversity of cultures, we are one human family with a common destiny; The protection of Earth's vitality, diversity, and beauty is a sacred trust; When basic needs have been met, human development is primarily about being more, not having more;"*

Therefore, of major interest in being entrepreneurial and innovative and creative, an individual's eco awareness of highest Self is spiritually committed to serve the planet as a whole, moving from me awareness to we awareness (Scharmer,2009). The I-In-Now is the meeting point in the middle of the vertical and horizontal level. Motion on a vertical level takes place between the leader's small self and his or her big SELF (Scharmer, 2009). This is the point of calling where a leader asks, "Who am I?" "What is my purpose?" (Scharmer & Kaufer, 2014). Blackmore suggests that selves are co-adapted meme complexes. They are sets of memes thriving in one another's company. According to Blackmore (2013), "I" am one of the many co-adapted meme-complexes living within this brain, the collective consciousness. A balance between the small and big SELF is one of the two basis points for motion leadership. Master Nan (2015), a Buddhist monk, defines the difference between the small and big SELF as such:

The small self and the big Self come from the same source. The mind comes from the same thing. One origin for both of them. The whole universe is just one big Self ... Once you reach the state of no self, the small self, you reach the state of the big Self. Getting rid of the small self you reach the state of the big self or the large self. Compassion, loving, etc., all of that originates from the big Self. You no longer will be selfish from that large self.

The second basis point for motion leadership is to build dense relationships (social capital) that form systems and networks. A combination of the big Self and social capital activates motion leadership from the I-in-Now position. The process of motion seems simple: being before doing and then acting on the instant. To act as a collective body of consciousness, every leader should first act from out an “I-in-Now” position (Scharmer & Kaufer, 2013); connecting with the deepest source inside the leader’s self that sets motion forth (Scharmer & Kaufer, 2013).

Scharmer (2009) states that the individual reaches out of its own boxed-in self and reaches out to a diversity of others such as peers, stakeholders and other perspectives around itself on a horizontal level. Then the individual self also connects vertically with its own self and its best, higher Self. After that, the connection between the vertical and horizontal connection connects the I-IN-Now, the moment of action and of awareness from where all movement spreads towards sustainable development. According to Scharmer (2009), the leader’s mind is not supposed to go back to things of the past, but has to be kept in a state of awareness in the now and then moves into the emergent future.

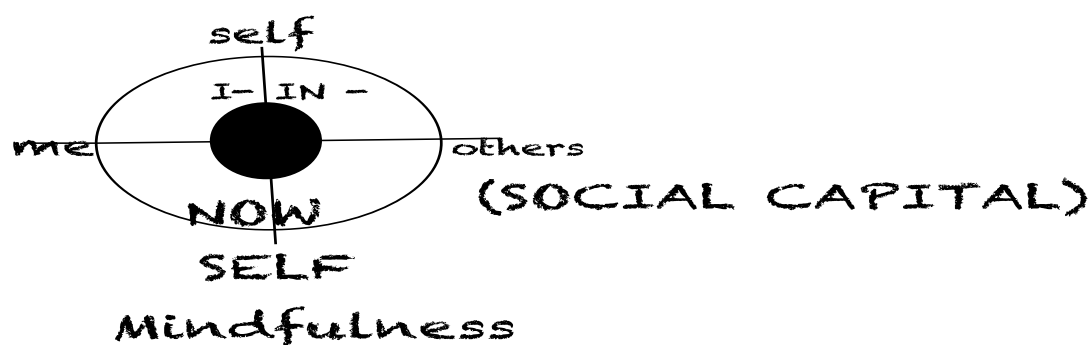


Figure 2.4: The I-IN-NOW (Presencing Institute, 2016)

Fullan (2015:152), in his teachings on how to lead from the middle says, “Your middle is where you find yourself and your group.” Fullan (2015:152) continues to say, “your middle position puts you in the best position for improving things by integrating vertical and horizontal forces”. The middle is the place where me, we and the (ecosystem) – or, what Fullan calls, the larger system – connect (Fullan, 2015).

A total inversion of the system took place. Scharmer and Kaufer (2013) liken this inversion to a sock turned inside out and refer to this movement as *Umstulpung* or inversion. Scharmer and Fullan’s theory can be captured as such as shown in Figure 2.5 below.



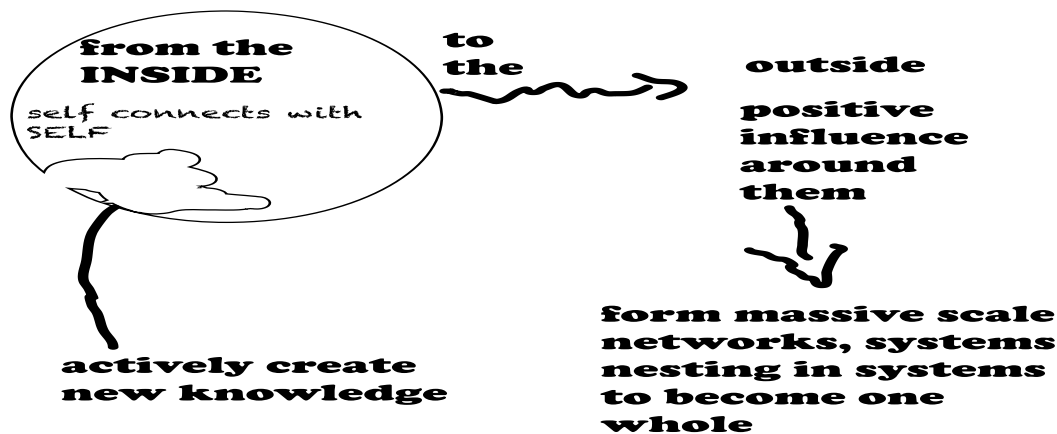


Figure 2.5: Systems influenced by norms of the system adapted (Hargreaves & Fullan, 2009)

Lifelong learning is learning that develops lives and shapes the world. What should underscore lifelong learning is a moral issue (Hargreaves & Shirley, 2009). Motion leaders should be able to know, "Who am I?"; "What is my passion?" Scharmer (2009) identifies the moral purpose as the place right in the middle between the past and the future. Scharmer calls it the now, the place where one asks, "Where does our commitment come from?" This, he says, is seeing from our deepest source – a spiritual experience. Systems thinkers believe that knowledge is not from the mind but from the will. Scharmer (2009) believes that the open will shift individuals' perceptions. Knowledge, skills and behaviour that the individual self holds onto are transformed in the open will. The individual changes his habits of the past (those that are not sustainable and friendly to the planet) to a new consciousness, incorporating the six learning skills for sustainable development. He takes on the futuristic sustainable development principles to integrate him into the future; from boredom to action; from non-collaboration to collaboration.

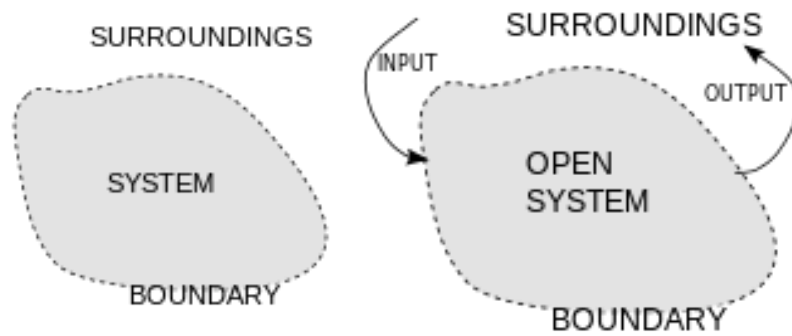
Systemic leaders have learned from biology to do the same in social networks. This whole idea of movement in systemic thinking from the I-in-Now is born from the theories of evolutionists Maturana and Varela (Presencing Institute, 2016) They believe that living systems are in continuous movement; never static. Francisco Varela states that there is a circular movement in living systems. When the cell operates far from equilibrium, according to Ilya Prigogine (Capra, 2002), new structures and forms develop, which creates growth and creativity. These biologists believe that living systems are autopoietic systems in the physical space – a system capable of reproducing and

maintaining itself, changing constantly together. This is a process in the system of continuous movement between the individual and the environment.

Maturana and Varela explain movement of cells (a biological concept that is applicable to humans) as an operationally closed system that can manage itself due to a network of reactions that regenerate the components inside its boundary. According to Maturana (2007), living systems are circular in form and structure. These are all interconnected to make up a single whole structure. None of these structures has a beginning or ending point; it is horizontal without linear forms. Movements starting at any of these points will eventually return to the starting point. They are all interdependent on one another. Each self-organised cell (human) functions in the same way inside itself. The identity and unity of each system are maintained by the inside codes of behaviour. The environment around the self-managed cell has its own structure and operates apart from the cell. Movement fluctuates between these two systems on a continuous basis.

There is a necessary structural congruence between these two systems, but the perturbations of the environment do not determine what happens in the living – rather, the structure of the living being that determines what occurs in it. In other words, the disturbing agent brings about change simply as a trigger, but the change is determined by the structure of the disturbed system. The same holds true for the environment – the living being is the source of perturbation and not of instructions, we can deal only with unities that are structurally determined (Whitaker, 2001).

Should individuals operate on their own, such as micro managing, they close the system between them and their surroundings. For motion to take place, a system should be open at all times in order to generate movement between the individual, group and their surroundings such as trees, climate, etc. (Capra & Luisi, 2014). Interaction between observation and reflection on the motion leader's part feeds moving communication. Friesen and Scott suggest, "formative feedback loops that provide ongoing descriptive feedback will help students enhance works in progress". The first sketch serves as an illustration of a destructive system or closed system and the second sketch as an open system where collective creativity takes place (Figure 2.6).



**Figure 2.6: Systems to provide feedback (Capra & Luisi, 2014)**

Leadership in the networked context is no longer a title. Leadership is a distributed function within a school or district that creates learning environments for all the stakeholders. According to Fullan, context is everything. When motion leaders change the environment, they change the other leaders and with that the holistic environment around them. To illustrate the point, Rowland and Higgs (2008) have constructed a Changing Leadership framework whereby a balanced leadership scenario can take place to strengthen networks. They identified the Attractor and Container as two positive practices set up against two negative practices to create a balance. They call it the ‘unfreeze-change-refreeze’ that changes to the ‘freeze-adjust-unfreeze’ approach. The leader’s task is mainly to map patterns of behaviour in a community and then put in an effort to adjust the behaviour. In the end, the leaders unfreeze the new situation so that values, beliefs and rules can be transmitted from one community to another. Only process and connections can create change; leaders can only tamper with the conditions for change. Leaders have the task to disturb the equilibrium to strike a balance between stability and change all the time once they have mapped the patterns of behaviour. Fullan (2010) is of the opinion that motion leadership freeze and unfreeze context continuously. According to Fullan, context is everything. changes context for the very reason that context is everything. When motion leaders change the environment, they change the other leaders and with that the holistic environment around them.

## **2.5 MOTION LEADERSHIP AS A LEADERSHIP STRATEGY TOWARDS CHANGE FOR SUSTAINABLE DEVELOPMENT IN SECONDARY SCHOOLS**

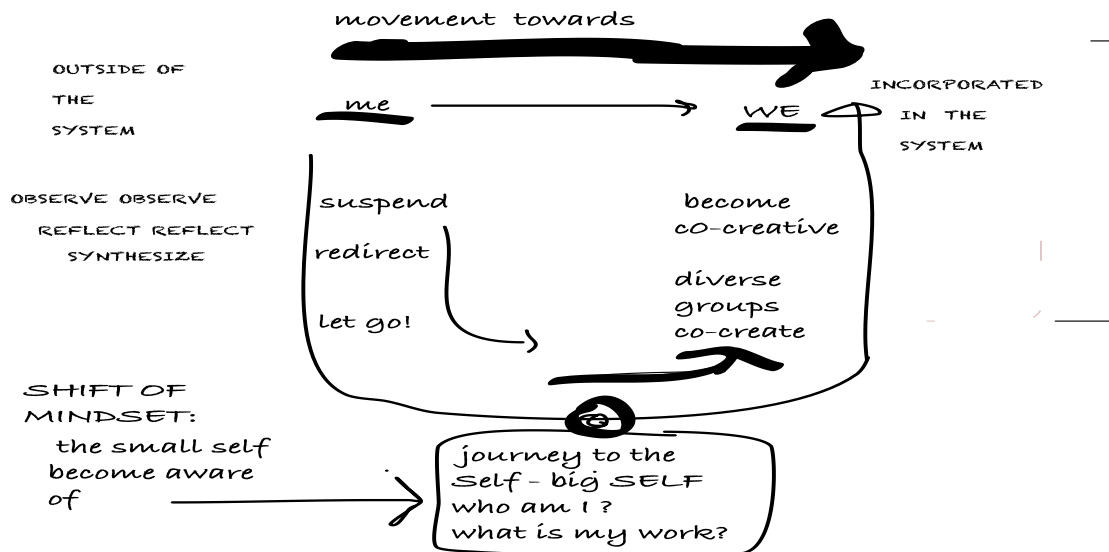
Motion leadership on the personal, group and institution level can make use of the framework Theory U developed by Otto Scharmer, a theory that works along the same lines

as those of Integral Theory. Theory U is a framework, a method of “how-to” and, most importantly, a way of being. Theory U is a system’s theory that provides a platform for micro, meso-, macro- and mundo-levels (Scharmer & Kaufer, 2013) to bring about leadership in change. Most importantly, at all these different levels of awareness (also called consciousness) is that of experience. Experience, according to Varela (Scharmer & Kaufer, 2013), is suspension, redirection and letting go.

Such frameworks for theories provide more than what can be measured, bypassing the material world and entering a realm of spirituality. Awareness and consciousness are the same concept. Motion leadership emphasises a move from me-to-we awareness, ego-to-eco awareness and institutional inversion to bring about a happy society.

### **2.5.1 Strategy 1: Move from Me-to-We Awareness (Personal Inversion)**

An open mind allows the individual to come to new insights and beliefs. This usually happens after the individual worked in a diverse environment among a diversity of people around a shared project where a lot of observation and reflection took place. Afterwards, the individual opens his mind to take on the beliefs and values that might differ from his own. Together, the group start to co-sense the future (Scharmer, 2009). See Figure 2.7 below.



**Figure 2.7: Group start to co-sense the future (Scharmer, 2009)**

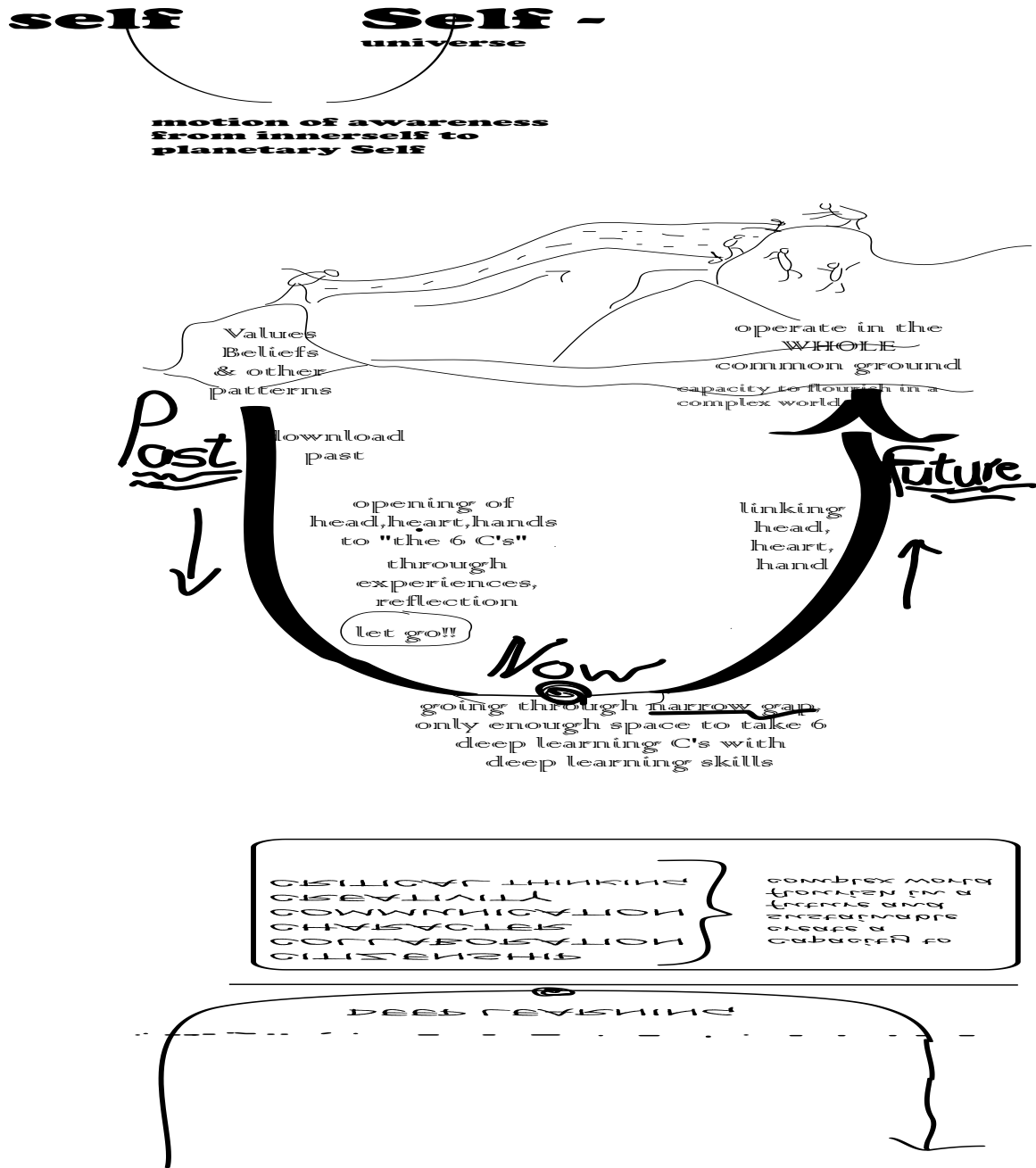
For the individual/organisation to go through the motion of downloading his unsustainable ideas and habits and behaviours of the past, the motion leader (Fullan, 2016):

- needs to be focused on a small amount of goals (six deep-learning skills)
- share goals with peers
- group changes the group to co-create

Once the individual self reaches the deepest level of the U – the open will stage – the individual goes through a narrow gap, unloading his old habits and values to take up the new (Scharmer, 2009), sustainable development principles from Agenda 2030 (United Nations, 2015) and Agenda 21 (United Nations, 1992) as condensed in the six deep learning skills (Fullan, 2010). At the deepest level, the individual is ready to let go and to allow the new in (Scharmer, 2009). According to the new understanding of cognition (Santiago theory of cognition), the individual does not understand with the mind, but with a deeper level of knowledge (Scharmer, 2009) that comes from the open will. To come to the deep level of cognition, the individual observes deeply; he reflects and then connects to what wants to come forth from his deepest feelings and then acts instantly. Tapping into the deep source of creativity makes an individual innovative for the cause of the greater good. Deep in the deepest level of the U, the individual gets quiet through yoga, meditation, and anxiety relief programmes such as Mindfulness-Based Stress Reduction (MBSR), all

of which are based on Buddhadharma, the foundational teachings of Buddha (Scharmer & Kaufer, 2014).

These programmes help to bring the individual into a spiritual realm to connect to the great Self. This is where the boundary between the observer and observed collapses and the individual sees him or herself in the present moment. The beam of observation does not focus on the world outside him, but reflects back to its own source. Emerging with the great spiritual Self ties the individual in the system of life to become one, not only with other humans, but also with nature itself. Mindfulness opens up the individual's mind, heart and will to have an experience of interbeing. Interbeing is a sense of belonging and connection with the other (Rotne & Rotne, 2013). In this state of the self, connecting to the Self, the individual finds an interconnected space with others. This brings about happiness (Rotne & Rotne, 2013). Through deep learning, global citizens move into new spheres of the emergent future, taking with them the six deep learning skills for sustainable development. The three big divides of previous unsustainable development become one of sustainable development as seen in Figure 2.8 below:



**Figure 2.8: Condensed goals: Six deep-learning skills (Fullan & Langworthy, 2012; Capra & Luisi, 2014)**

For humans to flourish in a sustainable future requires “life-long creative learning that is also referred to as personalisation or self-integration that refers to connected and collaborative problem solvers” who are “... happy individuals who contribute to the common good in today’s interdependent world” (Hargreaves & Shirley 2009).

## **2.5.2 Strategy 2: Move from Ego to Eco Awareness (Relational Inversion)**

Turning the beam onto the self helps to make the transition from an ego to eco awareness. Judgementalism and cynicism should not be present if one wants to make a change. One needs to learn to see oneself through the eyes of others and of the whole (Scharmer & Kaufer, 2013).

Kabat-Zinn (2012) is of the opinion that mindfulness requires one to be present, in the moment, and without judgement; where the attention goes, is where the energy flows. When the small self (individual) becomes aware of how it thinks, how and what it feels and is aware of how it behaves – which is emotional intelligence – such a person is able to move their energy in such a way to empower themselves and to make good choices instead of making silly reactions to a situation or to others. Self-observation makes one ask, “Who am I?” A person or institution goes through a flow of awareness, acceptance, of change and then of growth (Scharmer, 2009). However, the consciousness underlies all of that. Acceptance means no more resistance and no more judgement.

### *2.5.2.1 The skinny*

The idea is to implement the 17 goals as mentioned in Chapter 1 for sustainable development in the 2030 Agenda and Agenda 21 of the United Nations for Sustainable Development, in the form of six new pedagogies for deep learning (Fullan & Langworthy, 2013) into all schools in the province of Alberta. Fullan (2010) coins a small amount of goals to move whole systems as “the skinny” (Fullan, 2010).





Figure 2.9: The skinny (Fullan, 2010)

According to Fullan (2010), the skinny refers to the very essence of the matter at hand. Working with the essence allows leaders to simplify change and at the same time make change with impact. When there are too many targets standing in the way of bringing about change on a large scale, people get lost in the vastness of change.

Scharmer (2009) uses the image of the eye of the needle – referring to a gate in ancient Jerusalem called “the needle”, a narrow gate that could not fit a camel carrying through a heavy load. Before the camel (Scharmer, 2009) could enter, they had to take the camel’s baggage off. Scharmer (2009) refers to a U-shape that holds the gate right at the bottom. In order to take the journey from the left of the U (ego awareness), through the narrow gate at the bottom and onto the right side of the U (eco awareness), a person first needs to drop his or her baggage from the past and only keep the essential bundles for the journey onwards – the new beliefs and behaviours learned. The journey forward also requires of humans to move together as people. (Fullan, 2010) suggests that powerful change can only take place when massive amounts of clusters of people team up to work together. Therefore, the United Nations established the 17 sustainable development goals for humanity to work together towards change.

### 2.5.2.2 *Communication*

Dialogue and seeking consensus on a daily basis among different stakeholders and diverse ideas and values help to bring synthesis to the situation. This is unlike the traditional type of conversation (Scharmer & Kaufer, 2013). The results are not predictable. There are four levels of communication (Scharmer & Kaufer, 2013):

- Level 1: One-way top-down conversation that is focused on the speaker's agenda only
- Level 2: Two-way discussion between two parties where the one informs and the other reacts
- Level 3: Multilateral stakeholder dialogue – each one sees himself through the eyes of another
- Level 4: Co-create eco-system innovation – shift in mind-set of each one in the group from ego awareness, holding to their way of seeing and believing things to eco awareness, seeing and accepting and changing according to the well-being of the group, building a collective wisdom.

Level 4 allows an eco-awareness whereby motion leaders take on the new principles for sustainable development, namely citizenship, collaboration, creativity, communication, critical thinking and character change. The group now sees from their deepest source of itself. The ego is transcended and the individual together with the group follow the objective moral laws within themselves, which is done by intrinsic motivation and free choice. Something spiritual happened to the group that enabled them to feel the possibility of a future (Scharmer & Kaufer, 2013) wherein they obey the moral laws (for example, Fullan's six C's).

### 2.5.2.3 *Mind, heart and will*

Change requires an open heart, mind and will – change towards sustainable development depends on an individual's intrinsic motivation. Opening the heart, mind and will (Scharmer, 2009) allows an awareness and an inversion in the individual self to integrate with the whole of life; the living Earth, which Capra and Luisi (2014) call the "Systems View of Life". The

terms *inversion* and *awareness* tie in with eastern spirituality’s beliefs of opening up and integrating with a deeper source of the individual self (Figure 2.10).

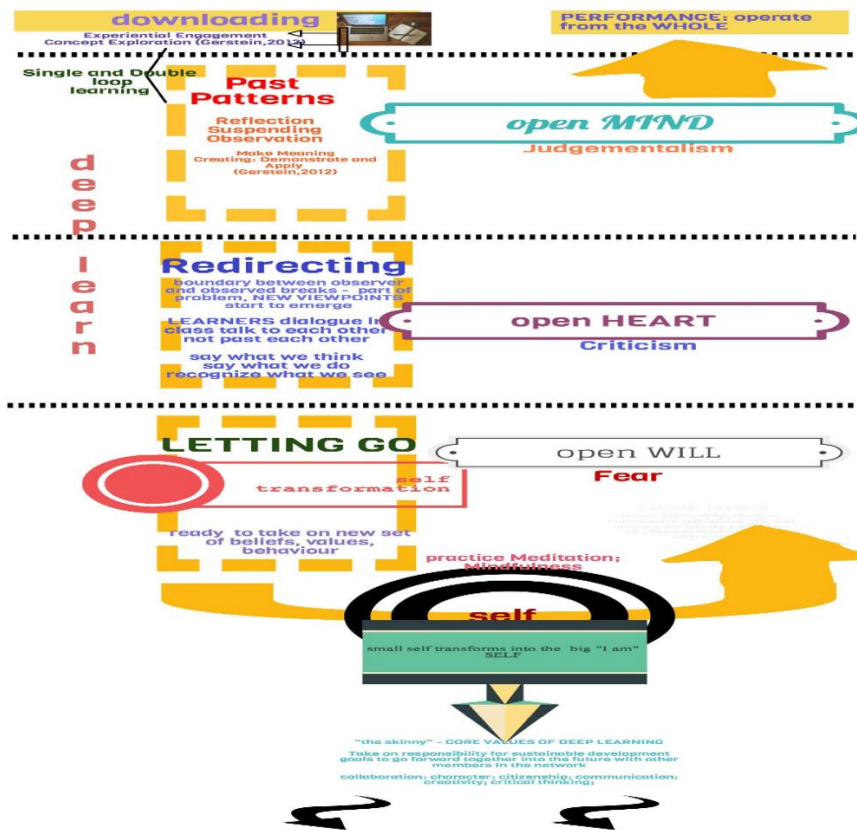


Figure 2.10 Opening the heart, mind and will (Scharmer, 2009)

Meditation allows the mind to empty itself and make a space for that “something” to fill the space. Personal Inversion reflects the idea of opening up to a world within the individual self (self-awareness), an open space wherein the individual becomes one with his or her deepest being of the self. Personal inversion refers to the *autonomos* (Fullan 2015) side – the individual self. The self is a self-maintained individual that has to play its role in the network of life. Evolutionist theorists like Maturana and Varela (Capra & Luisi, 2014) have identified the main characteristic of life as self-maintenance due to internal networking in a system that reproduces itself continuously. Maturana and Varela have identified the single individual as the central element of the living system. Living species are continually self-producing. This process is referred to as autopoietic (*auto* meaning *self* and *poiesis* meaning *to create*).

The common understanding of evolution (Capra, 2014:129) is that change happens inside each self-managed organism. Once the change happens inside the self, it moves outwards. Evolution theory teaches that what happens inside individuals – the change within them towards the greater good helps them to see and act instantly in causal relationships that unfold in layers of patterns. They can think innovatively and creatively to identify opportunities; when and how to intervene in systems to obtain their goals; and could be able to predict how a system will develop and the outcome thereof, should problems arise (Stewart, 2012). Having an open mind, heart and will is an essential part of motion leadership.

A closed-mind leader is someone who is still stuck in its previous downloading of past patterns. The attention is still stuck (Scharmer & Kaufer, 2013) in the leader or organisation with no way out. The mind is still closed. The second figure demonstrates that judgment is suspended and the leader is open to new ideas. Through communication such as dialogue they are starting to see one another's differing points of views. Dialogue involves active listening, which then relate their own and other people's experiences through small-group discussions. Then they come to consensus, which refers to 'sensing'.

The primary job of leadership, the researcher has come to believe through her work, is to enhance the individual and systemic capacity to see, to attend deeply to the reality that people face and enact. Thus, the leader's real work is to help people discover the power of seeing and seeing together (Scharmer, 2009).

Open-mindedness, on the other hand, points to those who open themselves towards change for sustainable development to other possibilities from what non-system thinkers in the industrialised worldview used to believe to be true.

Open heart –the boundary between observer and observed – disintegrates. The observer (leader or organisation) starts to see the organisation or issue at hand from a different point of view. The leaders start to see themselves as being part of the system that the leader observes. No longer is the system out there; it is here, right here and now! Collective wisdom starts to form at this point. Their hearts open up where they experience deep emotional perception. They start to "see" with their heart. Past social norms and beliefs are of no importance anymore, while the open-heart senses the good of the new that is there in their midst.

The open will – the leader go to the edges of the self (Scharmer & Kaufer, 2013). Leaders in the organisation let go of their old habits and allow the new to enter into their mind, heart and will. They act from beyond their school or classroom boundaries. This step means to act from the emerging space across the school, the district, as well as across other institutions like healthcare and businesses (Scharmer, 2009).

Leaders reintegrate the mind and brain (matter) and operate from the now from where they can go into action. Cognition is an integration of mind and matter. Fullan (2015) describes the process of erasing the boundaries between the observer leader and the observed as diffusion, wherein the new formed ideas spread out and wherein “my ideas” becomes “our ideas”. After all, Fullan (2015) states that sustainability on a global scale involves identifying with and doing something that helps improve the bigger picture”. The key to the change process always remains that of building social capital or relationships between everyone to “**spreading and adapting** good ideas” (Fullan, 2015:6).

#### *2.5.2.4 Danger zone: The blind spot*

The biggest obstacle to change towards sustainable development is what Scharmer (2009) calls, the blind spot. This blind spot, according to Scharmer (2009), involves our ability to experience the process of how our social reality unfolds before our eyes. Reality to us is only a thing, something outside ourselves that is separate from the self. Reality is something that happens to us but that we do not see ourselves as part of reality. Master Nan, according to Scharmer (2009), believes that our lack of seeing our selves as part of the whole is because the head, heart and will is closed. To open the self to become a higher form of itself, Master Nan suggests leaders enter the seven meditational spaces also called charkas. Judgementalism, the opposite of happiness and fear, should be erased in order to open the head, heart and will. A network cannot function when judgementalism, cynicism (such as depression), fear (like anxiety and other emotional unstable elements) are present (Scharmer, 2009).

Emotional Intelligence is a cardinal priority for successful change. All processes and systems need to integrate all the time to form creative patterns into the emerging future; otherwise, the living earth will die (Capra & Luisi, 2014). Judgementalism (Fullan, 2010)

conveys a negative message – leaders should rather use purposeful peer interaction, capacity building and project learning activities to avoid being judgemental.

### **2.5.3 Strategy 3: Move towards Eco Awareness (Institutional Inversion)**

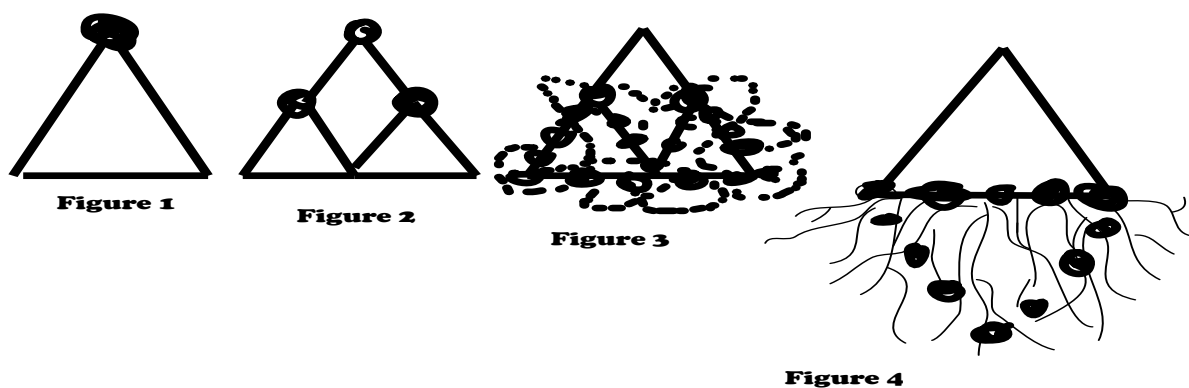
The root of massive whole system change starts with the individual. Institutional inversion (*Umstulpung*) means “becoming into the world” or namely that of sustainable development principles coming into being; things like what globally popular center, namely the Gross National Happiness Centre Bhutan (2016) says, that the earth needs less consumption from human species on the earth’s resources; social justice by serving others sharing everything and have an equal amount of everything; peace and a happy society that focuses on happiness (GNH) and not Gross National Product (GDP). Happy species know their innate wisdom; they know “Who am I?” and “What is my purpose/calling?”

Most importantly, sustainable development (according to the United Nations (2015), is about living in harmony with nature in a very spiritual sense. Deep-learning skills infused in each individual allow for character education (Fullan for systemic thinking, citizenship responsibilities towards the planet, creativity, communication, collaboration and critical thinking skills that lead towards collective wisdom to serve the greater good of the planet. Such individuals within the system are open systems that constantly form new creative layers of patterns and networks communicating collaboratively to solve problems in the moment through their critical thinking skills.

Communication through open systems keeps the planet well and healthy. Closed systems will kill the planet (Capra & Luisi, 2014). According to Scharmer and Kaufman (2013), motion leaders at institutions shift leadership from one place (ego) to many places (eco). Motion leaders are not supposed to move in one place only, but to shift outside the boundaries of the school. Co-creative relationships between the different stakeholders hold the eco-system together. The power is no longer at the top of the pyramid but moves down to the base, to the periphery of the system or network and finally to the surrounding sphere of the system.

Leadership starts in the middle. Fullan (2015) mentions that leadership starts in the middle. Mobilising the middle – such as districts, school boards – develops broad layers of networks, working upwards and downwards towards change. However, the middle can be

anywhere in the system. At the surrounding sphere of the system, the source of power moves throughout the whole network or eco-system. Leaders work together through coordination because they share the same values and beliefs (Scharmer & Kaufman, 2013). For instance, the school and families could work together in the middle by doing community work or sharing the same facilities in the same building under the same rules and regulations; sharing the same educational programmes. Lines blur between school and community.



**Figure 2.11: An inside-out scenario and upside-down scenario (Fullan & Munby, 2016)**

The first diagram in the Figure 2.11 above shows the movement from the inversion where the source of power sits at the top and in the centre. The second source of power moves beyond the organisational boundaries, while the third figure in Figure 2.11 shows the surrounding eco-system. The last figure in Figure 2.11 shows how the pyramid is fully inverted and upended (Scharmer & Kaufer, 2013), an inside-out scenario and upside-down scenario (Fullan & Munby, 2016).

The end goal is to move to eco-system awareness where co-creative relationships from the whole eco-system interact and are interlinked. The idea is to get leaders who have the right mind-set to move to eco-system awareness (Figure 4). Figures 1 to 3 in Figure 2.11 have not addressed the inner transformation (ego to eco awareness) yet (Scharmer, 2013). Figure 1 is about traditional awareness, such as loyalty, following traditional and memorised ways of doing, working on its own with authority. In Figure 2, people are still stuck in ego-awareness where, but stakeholder awareness in that one carries both the others' interests and those of their own. Figures 1-3 in Figure 2.11 are not in touch with sustainable development, the challenges we face in the 21<sup>st</sup> century and the need to change values and

behaviours for the emergent future. According to Scharmer and Kaufer (2013), stakeholders, as demonstrated in Figure 2.11, with special reference to Figure 3, still operates on ego-system awareness, which can also be seen in Figure 2.3. Stakeholders do not have the interest of every other species in mind. Figure 4 blurs the boundaries between ego awareness and eco-awareness (Scharmer & Kaufer, 2013). Figure 4 shows how the ego lets go to allow for eco awareness (Scharmer, 2013). Diverse groups co-sense and co-create a sustainable development future. At this point, the ecological, social and spiritual divides are interlinked. Once one reaches Figure 4 in Figure 2.11, one has already undergone the journey of change of whole-system reform (Scharmer, 2013). This shift in mind-set and in consciousness means the mind-set moves from valuing the self's own ideas and beliefs and changes it out with a deep-learning mind-set "that values the well-being of one's partners and of the whole (2013)".

Figure 4 in Figure 2.11 reveals an integration with ecological, social and spiritual realms, bringing the great divides of our time together. The first three figures have not arrived at the point where deep ecology is present. In the first three figures, the mind-set is still what is referred to as shallow ecology. Up to this point, one can still speak of distributive leadership. Deep ecology reaches down and buffers itself against shallow ecology. The difference between Figure 3 and 4 in Figure 2.11 is that Figure 3 dominates the eco-system, while Figure 4 has a moral purpose to take stewardship of the eco-system as integrated members of the whole (Scharmer & Kaufer, 2013). Integration of all species in one whole system of networks with each species that possess over the same inner drive as the rest is the goal of motion leadership. Motion leadership wants to change educational systems and reform whole systems to be sustainable. Fullan (2010) states that leaders mobilise leaders, meaning that all leaders have an equal responsibility to teach one another the same principles. When leaders develop one another, they multiply the motion. According to Fullan (2010), motion leadership is about the awareness of context and that context is everything as seen in Figure 1 to 4. Figure 4 is spiritual. Figure 4 falls in the yellow (Scharmer & Kaufer, 2013) state of the seven stages of karmas or consciousness, because Figure 4-solutions allow the individual institution to move through transforming the whole system – the opening process forms the ego to eco. This is the place where one lets go of the old and invites the new.



One of the cornerstones is practising mindfulness to let go and let come of the old and new. Mindfulness allows for bending the beam of observation back onto the inner soul. Rudolf Steiner's mindfulness exercises for spiritual development develop the self to come into being with a higher self. The open will accepts the new and at this stage of meditation, the person seeks unity with creative forces of the cosmos. Interaction and integration between the environment and individual refer to deep ecology. At this point, there are no boundaries between subject and object, between the mind and matter. Subject and object moves into the same space. The culture not only changes, but also becomes religious in itself. Some life forms no longer have greater value than other life forms, (eco-awareness), wherein humans are subject to the environment. Human concerns are no longer the ultimate measure point. Eco-system awareness erases the notion that humans are more developed than other species are (Capra & Luisi, 2014). The school system, like all other institutions, topples down from the top of the pyramid to become part of the environment. Fullan (2010) refers to whole-system reform. Boundaries between schools and districts, together with national and international school organisations, blur to become part of the whole system of life.

## **2.6 SOCIAL CAPITAL: OPEN AND CLOSED SYSTEM**

People's positive experiences and belief about where and how they belong is of the utmost importance for change towards sustainable development. Building trust and happiness among all people to have a dense social network is good social capital. Social capital is defined by the OECD (2001) as "networks together with shared norms, values and understandings that facilitate co-operation within or among groups" (Schrivens & Smit, 2013).

Social capital (Fullan, 2010) means that networks have value; this is the central theme of social capital. Building relationships and building trust (Fullan 2010; Bartkus & Davis, 2009), creating information flows; all these elements lead to collective action and broaden the me mentality into a we-mentality (Fullan, 2010) Social capital explains behaviour (Bartkus & Davis, 2009) and social capital is for everyone; anyone can enter the system since it is, according to Bartkus and Davis (2009), not private property. Trust (Katz, Earl & Jaafar, 2009) is crucial for social capital.

**Table 2.1: Building social capital in the school through engagement: from ego-awareness to eco-awareness (me-thinks towards we-think) Partnerships (Fullan & Langworthy, 2014)**

<b>SOCIAL CAPITAL (RELATIONSHIPS) BUILDS NEW LEARNING</b>	
<b>Partnerships</b>	<b>Accelerate change</b>
The school principal's main task is to build social capital in a school according to Hamlett and Fullan (2013). Teachers learn from students and students from teachers and peers. According to Fullan (2013), the main role of the school principal is to build social capital in and outside of the school in a focused way	A focused way (Fullan, 2013) points to improving firstly, pedagogy and secondly, student achievement for sustainable development and thirdly, to build leaders to help other leaders and set the motion forth of motion leadership in and outside the school. Classmates, teachers, leaders all are glued together.
Schools networking with schools. Schools in networks – whole districts building social capital.	To improve at a greater speed, schools need to have strong relationships to move faster towards change. Every school works within a network with five or six other schools and each network work with one another within the whole of the system. Leadership teams learn from one another. They share all practice, information, resources – through class visitations teachers learn from one another. Networks always focus on specific themes.
Whole districts learning from one another – learning community as a whole	Have learning fairs, share information. Build communities and networks fast.

Fullan (2013) believes that one should use the group to change the group. He also states, “teamwork trumps individual work in your school and system. Fullan (2013) suggests that social capital (which builds networks within the system of the earth) is evolving all the time, creating constant new patterns and processes within the whole of the system

Capra and Luisi (2014:67) are of the opinion that “From the beginning of ecology, ecological communities have been seen as consisting of organisms linked together in network fashion through feeding relations.” They also state, “Living systems are self-generating networks,

meaning that their pattern of organisation is a network pattern in which each component contributes to the production of the other components.” (Capra & Luisi, 2014:313)

There are three types of social capital. The first type, bonding capital, is not welcome in the systemic view of life. Bonding capital is seen through the lens of systemic thinkers as those who create fragments. The holistic system believes that bonding capital will kill the system.

**Table 2.2: Types of social capital (Putnam 2000; Bartkus & Davis, 2009)**

<b>Types of social capital</b>	
Bonding capital	Stewart (2012) sees interbreeding of organisms as a dangerous thing, because it creates weaknesses within the system. There is no cross-- pollination present in evolution. Such inbreeding can destroy the open system. Bonding capital, according to Putnam (2000), is referred to as social networks between networks (groups) that hold to the same values, beliefs and behaviours. This type of social capital is seen as negative since it does not keep the systems open because it does not allow outside influences to change the group from within. Bartkus and Davis (2009) describe high-distrust social capital manifested in fear, scepticism, cynicism, wariness and watchfulness.
Bridging capital	Putnam (2000) explains that bridging in social capital happens when heterogeneous networks reach out to one another. Diversity stimulates creativity, because it allows problems to arise and when the members of these different groups come up with creative problem-solving strategies, the balance in these groups takes place and ensures the system to remain open between these different networks. Bridging helps to create inclusive institutional structures. Bartkus and Davis (2009) describe high trust manifested by hope, faith, confidence, assurance and initiative although still at arm's length.
Linking capital	Putnam (2000) is of the opinion that linking capita; refers to different networks interlink with one another. Systems nest within systems. These patterns of deep-rooted interconnections keep the living system emerging (renewing) itself. Bartkus and Davis (2009)

	describe linking capital as interdependence promoted, opportunities pursued and new initiatives.
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Motion leadership cannot take place when some individuals refuse to go along with the whole network. Some learners are stuck in ego-awareness (me-think) as opposed to eco-awareness, (we-think) (Putnam, 2000; Dweck, 2008; Scharmer, 2009; Capra & Luisi, 2014) and that makes the system die down as seen in Figure 2.12.

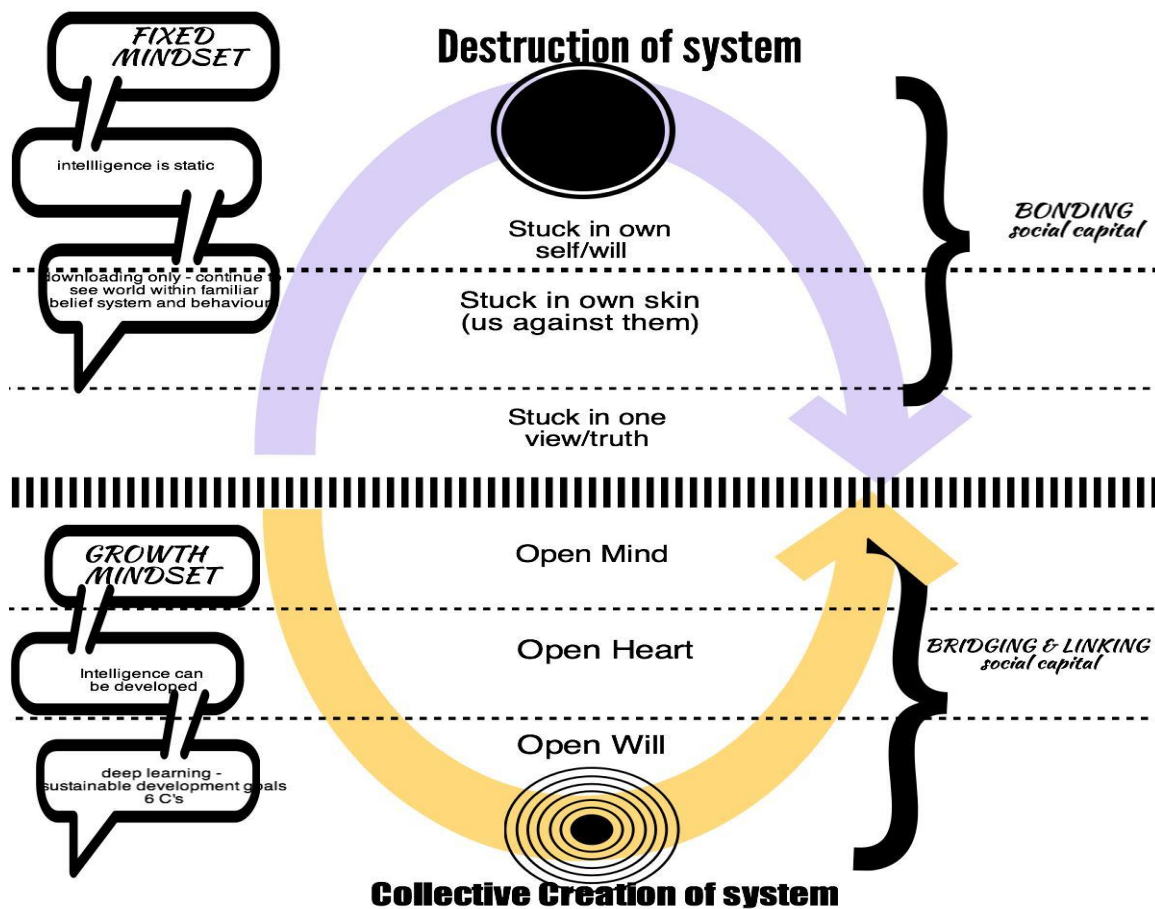


Figure 2.12: Destruction of system versus collective creation of system (Scharmer, 2009; Dweck, 2008)

Should certain organisms not comply with the values of sustainability set out by organisations, technology and institutions they will kill the system (Capra & Luisi, 2014). Scharmer (2009), in Theory U, describes non-compliers as those who are stuck in one truth and one self as abusers of the systems and eventually destroyers of the emerging system. Dweck (2008) refers to the fixed and growth mind-set as distinctively a groupthink versus broad-minded thinking (Dweck, 2008).

## 2.7 CONCLUSION

For years, most people thought that leadership belonged to a few at the top. The systemic belief is that each individual is a leader that practises self-leadership. Leadership is of the utmost importance in the holistic system. Leadership means to go forth and die. It means to let go and to let come. Leaders let go of what they believe to be right, to be human, and to be spiritual. They allow embracing the new emergent future through the open will, vastly different from what they once knew and through and did. There is a rebirth into the new taking place with the help of meditation and mindful practice. The previous ideas, values and behaviours belonging to the past die. A leader knows him- or herself. A leader asks, "Who am I? What is my calling?" The beam of attention reflects back on the self. All individuals are leaders.

Yet, no leader can operate on its own. Every leader is interconnected in networks and systems. Therefore, bridging and linking social capital provides open networks throughout the whole system, that is to say it provides a growth mind-set throughout. Bonding capital without a diversity of people in the networks kills the network. Entire organisations and communities change and ultimately an entire civilisation and culture change because leaders work from collective wisdom. Leaders are incorporated, as shown in Figure 4 in Figure 2.11) into the systems view of life (Capra & Luisi, 2014). Collective leadership creates motion.

Motion leadership makes sustainable development principles circulating through classrooms, schools, communities and culture possible. Movement always go forward into the emergent future. Motion leadership needs to bring the new into existence in terms of Agenda 2030 and Agenda 21 goals. Motion leadership leads towards bringing the great divides of our time, social, ecological and spiritual together in one big whole. The planet needs to move into eco-system awareness to stay be sustainable and stop the destructive ways of old (Scharmer & Kaufer, 2013). 21<sup>st</sup>-century belief is that the earth is organic, spiritual and a living system. Motion leadership creates a spiritual society; humans want to connect their authentic self with their networks. Institutions have a moral mission; something that those in the network connected to feel proud about. The pivot point for change is mindfulness in the interconnected relationships within the broad system. Mindfulness is the transformation asked for by Agenda 2030 and Agenda 21. Collaborative networks pulled together in one holistic system towards equality and sustainable development leads to

radical changes. Motion leadership is instrumental for a total change in the world by 2030. Mass obedience to the 17 goals of Agenda 2030 through motion leadership makes it possible to control the entire planet in new emergent ways for the good of society, the well-being for all. The next chapter will deal with the research methodology of this study.

## **CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY**

### **3.1 INTRODUCTION**

The investigation was prompted by the challenges in the delivery of the curriculum and the implementation of sustainable development principles in Canadian schools. However, minimal research has been conducted on the topic of the role of motion leadership in the implementation of sustainable development principles in secondary schools.

As a parent of children in the Alberta school system, the researcher recognised that inadequate attention was directed towards the sustainable development principles in secondary schools. This study focused on the three legs on which motion leadership rests. The first leg is to set aside previous behaviours and values, and then go through a process of rebirth to open up towards sustainable development principles in secondary schools. Secondly, motion leadership interconnects with the larger system (inversion); and lastly, the enhancement of knowledge in existing literature regarding frameworks and philosophies affects motion leadership and sustainable development principles in secondary schools. It is anticipated the investigation would generate understanding on how motion leadership can have a role to play in the implementation of sustainable development principles in secondary schools.

A qualitative research method was employed in this study in order to investigate how motion leadership can play a role in the implementation of sustainable development principles in secondary schools. This chapter presents and discusses the purpose, objectives and paradigmatic approach to the study, the research design, sampling strategies, collection of data, analysing of the data, ethical considerations, and trustworthiness and credibility.

### **3.2 RATIONALE FOR EMPIRICAL RESEARCH**

This study sheds light on the role of motion leadership for sustainable development in the province of Alberta in Canada. The motion leader's role is to be a catalyst for 21<sup>st</sup> century competencies or skills to enable everyone within that particular system to react continuously on complex problems as they arise. The six learning skills or competencies should be part of everyone's framework for a ready-fire approach to the uncertain world some believe we are living in. Sustainable development principles can be adhered to once competencies or the six learning skills are part of each one's consciousness within the system. Motion

leaders who possess these skills can act from the present moment into the future on an ongoing basis. A great deal of data were created as the researcher investigated how the motion leader is able to act from out the present moment into the future continuously and also at the same time influence those around him/her. Data from the information gathered during the interviews is largely in accordance with the literature review. This study gives insight into what motion leadership towards sustainable development is and whether that is something that can be traced in Canadian secondary schools. Without this study, the information gathered from the literature will be a generalisation of the role of the motion leader in bringing sustainable development principles into Canadian secondary schools.

### **3.3 RESEARCH DESIGN APPROACH**

#### **3.3.1 Introduction**

Qualitative research is research guided by an approach that explore and understand what meanings individuals ascribe to human problems and is a process that utilise evolving questions (Cresswell, 2014). Cresswell (2014) furthermore suggests that data collection happens when the researcher builds from particulars to wider themes, where after the researcher makes his/her own interpretations because of the insight gained through, in this study's case, face-to-face interviews. According to Seidman (2013:25), researchers may want to "explore alternatives to the structure and procedures". The structure should be maintained in such a way that it allows the participants to reflect upon the questions and then allow them to reconstruct their answers (Seidman, 2013). Maintaining the intent of the structure should be the guiding principle (Seidman, 2013) which gives enough flexibility for exploration to get closer to what experience participants have. The interviewer immerses him/her self during the interview by asking questions, restructuring questions, respond to the participant and sometimes share their own experiences. Since both the interviewer and participant's perspectives are intertwined during the interview, one should acknowledge that the interviewer may at times have a distortive view and therefore need concentrate on listening to what the participant is saying, understanding what they are saying and then internalise what the participants said. Afterwards, the interviewer's deep listening skills will enable him/her to draw conclusions more accurately (Seidman, 2013). This study was conducted using the qualitative research approach. The role of motion leadership is explored to understand what influence this role may have on sustainable development goals in Canadian secondary schools.



Research designs are types of inquiry within qualitative, quantitative, and mixed methods approaches that provide specific direction for procedures in a research design. Research designs are also called strategies of inquiry, types of inquiry to provide for the direction for the elements and procedures in the study (Creswell, 2014:274). The research design for this current study was constructed on the concepts of Yin (2009:26), who defines research design as the logical sequence that connects empirical data to the initial research question and ultimately to its conclusions.

Case studies have certain ratifications. It is concerned with rich and definite descriptions of events relevant to the case. It focuses on an individual or a group and seeks to understand. The researcher decided to conduct case study because it involved a profound investigation of the phenomenon, which is the impact of motion leadership on the implementation of sustainable development principles in schools. A case study investigates one or more specific 'instances of' something that has to do with the cases in the study (Yin, 2009:18). Yin (2009:18) is of the opinion that a case study is an empirical inquiry and that this empirical inquiry explores a "contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not evident". In this study, the case is a person, such as a teacher and principal operating within a network. According to Henning, Van Rensburg and Smit (2004:4), a case study has an identifiable boundary, which has been particularly selected according to its degree of significance in effectively answering the research question. Case studies explore and reports the complex dynamic and unfolding interaction of events, human relationships and factors in a particular instance. Willis (2007:8) sees the case as an event, programme, institution or person where there are boundaries. Therefore, the researcher could "close in" what the study can be. In this study, the case was a principal, a group of teachers and the school as a community in a secondary school and their roles as motion leaders to implement sustainable principles.

Case study research has been defined by the unit of analysis, the process of study, and the outcome or end product, all essentially the case (Merriam, 2009). This qualitative approach "explores a real-life, contemporary bounded system (a case) through detailed, in-depth data collection involving multiple sources of information, a case description and case themes" (Creswell, 2014). The researcher had to identify the case, which was in this study the role of motion leadership in the implementation of sustainable development principles in secondary schools. The researcher employed a single case study with structured and

individual interviews and analysis of documentation. The qualitative approach was used to understand and explain the role of motion leadership implementation of sustainable development principles in schools and was considered the most suitable approach by the researcher. The case study supported the researcher in answering the research question. This was deemed effective to the study in view of its unique characteristics. It allowed her to get closer to the subject, for a comprehensive inquiry into the phenomenon under investigation, because it took place in a natural setting. The natural setting in this study was a school.

### **3.3.2 Research paradigm**

A paradigm can be defined worldview and has different fundamental assumptions, beliefs and different reasons for doing research (Willis, 2007). For the purpose of this study, the researcher selected a specific paradigm that determined how the research was conducted and how the research findings were interpreted. Furthermore, the study was informed by the interpretive epistemology.

Willis (2007:8) says an interpretative approach is an “entire framework to practice” and that every level influences the other. The study therefore concentrates on the interpretive paradigm. The conclusive aim of interpretive paradigm is to sharing people’s feelings, interpretations, definitions and discernments and develop a holistic and complex account of the problem under study (Creswell, 2014:196). Willis (2007:8) added that the interpretive paradigm facilitates understanding of how and why research questions. The questions asked in the interpretative approach is what kind of knowledge was valid and how one could make sense of relation.

The interpretative paradigm is appropriate to this study, since it is premised on a belief that people vary, and therefore multiple realities exist for them. The researcher anticipated revealing this when data collected from the principals and assistant-principals were interpreted. This interpretative paradigm is based on the natural world and for this study; it was the school in its natural setting. The entails firstly the idea that the experience through the senses is not always the best way of knowing something. Secondly, the reality one perceives is always conditioned by both one’s experience and one’s culture (Willis, 2007:8). Thus, the only way to which means the way knowledge is created, is by human interaction.

The researcher desired an understanding of how school leaders perceived and experienced the role of motion leadership in the implementation of sustainable development principles in secondary schools. In the context of interpretive epistemology, this implied their role as school leaders to implement sustainable development principles was explored from the perspective of the participants in my study.

### **3.3.3 Qualitative research approach**

The researcher employed a qualitative research approach to investigate the role of motion leadership in the implementation of sustainable development principles in secondary schools. According to McMillan and Schumacher (2010:320), “qualitative research approach is an accepted methodology for many important questions, with significant contributions to both theory and practice”. An extensive literature study was conducted in order to acquire clarification and theoretical background on motion leadership and sustainable development principles. The literature study was conducted by consulting newspaper reports, journal indices, review magazines and publications on educational research methods. The researcher examined documentation such as reports of various committees, newsletters to parents, official correspondence from the Alberta Educational Board in Canada, minutes of meetings, lesson observation reports, Alberta inspection reports and record of student results. The latest conferences about motion leadership, sustainable development principles, deep learning and other current trends in education are freely available on the internet. The researcher have listened to various speakers over the last two years. There is no single truth to be revealed when doing a study. The distinguishing characteristic of qualitative research is that behaviour is studied as it occurs naturally (McMillan & Schumacher, 2010:321). Brink (2007:11) argues that there are five key elements to qualitative research approach. These arguments are discussed in Table 3.1.

**Table 3.1: Key elements to qualitative research (Brink, 2007)**

Element to qualitative research	Application to the study
<p>Qualitative research is an attempt to understand the phenomenon in its entirety, rather than focusing on specific complex and broad concepts.</p>	<p>The study was beneficial in terms of identifying and understanding the key factors that influence motion leadership towards sustainable development in schools. Lastly, the findings of the study provided recommendations and strategies for policy makers on how to improve the level of implementation of sustainable development among school districts in the province of Alberta in Canada. The recommendations of this study could serve as a guidance for Education in Canada and provide a training programme for school districts in motion leadership in the province of Alberta, Canada. (This is discussed in more detail in Chapter 5.)</p>
<p>Qualitative research has few preconceived ideas and stresses the importance of people’s interpretation of events and circumstances, rather than my interpretation.</p>	<p>Participants were encouraged to answer the open-ended questions according to their own understanding and interpretation of what has been asked and discussed with them during asking the questions. The researcher was not out to get them to answer a question so that it could have a positive influence on the promotion of motion leadership. In addition, the researcher did not press them to show evidence that they are aware of who they are and what their purpose are in life. Discussion around the question lead me to understand their awareness level</p>

<p>Qualitative research does not attempt to control the context of my study, but rather attempts to capture that context in its entirety.</p>	<p>Qualitative research provides broad explanations (Cresswell, 2014) to explain issues such as motion leadership, sustainable development and eco awareness. The researcher began with a theoretical model and then use a theoretical lens such as a holistic, post-modern worldview, to provide an overall lens for the study of questions such as motion leadership, systemic thinking, the U-theory model and social capital. Qualitative research does not take on the posture of an authoritative power but rather allow the researcher to take control over the study within the context given. The theory is not the final goal of the study but builds from the data to broad themes (Cresswell, 2014).</p>
<p>Qualitative research analyses narrative information in an organised, but intuitive fashion.</p>	<p>Participants were asked how they view themselves, what their life purpose is which gives participants a chance of freedom to express their own views within a safe environment. Participants may use stories of their own lives to create a picture of how and where they view themselves within the system of life. Such information is then retold by the researcher who arranges it in a narrative chronology. At the end of the process, the narrative information is organised in a collaborative narrative, that of the teller as well as the listener to the narrative (Cresswell,2014)</p>

<p>Qualitative research assumes that subjectivity is essential for the understanding of human experience</p>	<p>The researcher has noticed what meaning the participants and the documents during data collection held for each one of them in their own way. Each participant viewed social capital differently. They spoke about deep-learning skills such as characterisation, communication, citizenship, creativity in different ways and attached their own meaning to that. Cresswell (2014) says that subjective meanings to stories told by humans are negotiated socially and historically. Nothing is imprinted on individuals but rather, humans form their own opinions through interaction with others and through historical and cultural values and behaviours that plays out in each individual's lives over a period of time (Cresswell, 2014).</p>
<p>Qualitative research involves sustained interaction with people being studied in their own language.</p>	<p>Patton (2015) states that language shapes experience and that language is a prime point of interest during fieldwork. Patton (2015) says that people use their own language to describe their problems and their anxieties about their work. Fieldwork involves learning the original language of each individual involved within their own setting (Patton, 2015) the researcher will try to see what language participants use to express themselves. The research process is ongoing and various emergent patterns in data collection emerges all the time. Questions that were meant to ask were changed during some face-to-face interviews, because the participants</p>

	<p>expressed their ego and eco awareness in different ways. Gender, age, years of experience were vastly different amongst participants and therefore the focus of questions shifted from time to time. Participants reflected on their personal goal settings in various ways, they had different interpretations in how important that is to connect with others that are different from themselves. Some were more connected to their own values and behaviours than others were and sustained interaction with the documents helped to observe the goal schools have towards sustainable development. The researcher used the field notes and reports that included the exact language used by each individual participant during the face-to-face interview. During the interviews, the researcher had the chance to explore the meanings of the words used by each of the interviewed participants that led me into the participant's own world (Patton, 2015)</p>
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In this study, the researcher attempted to understand the perceptions of the participants' by interpreted the digital recorded interviews in order to develop a base of knowledge regarding the role of motion leadership in the implementation of sustainable development principles in secondary schools. The researcher regarded this an important part of the qualitative approach. In order to retain the importance of the phenomenon under the scope light, attempts were made to gain a clear understanding of the perceptions of the participants by comparing their responses. In this effect, this means that the researcher becomes the instrument through which the data are collected and analysed (Cresswell, 2014).

### **3.3.4 Rationale for choosing the qualitative research method**

Qualitative research in order to get as close to the truth possible according to Willis (2007), as in the case of the particular study, should take place in the setting of the participant, a place where the participants experience the issue under. In this case, data are gathered by speaking to the principal, assistant-principal and one teacher in each of the three schools. Data gathered through interviews reflect each participants' thoughts and are a grand way to preserve the participants' experiences. By recording the interviews, the researcher can turn back from the transcript to the recorded interview to get clarity on unclear issues and that largely helps to avoid misinterpretation (Seidman, 2013). The design of the interviews was emergent and that allows the researcher to treat the study as a process evolving from insight to insight before conclusions were made. A holistic account of the problem could be drawn through the multiple perspectives of the participants.

### **3.3.5 Research problem**

The main research problem formulated and stated in chapter one, can be phrased as the following research question: What is the role of motion leadership in the implementation of sustainable development principles in secondary schools? The following four sub-problems derived from the main research problem and directed the empirical research of the study, are:

- What is motion leadership?
- How can motion leadership support change and improve sustainable development principles in secondary schools?
- Why do motion leaders have a role to play in the implementation of sustainable development principles in schools?
- What strategies and recommendations might serve as guidelines to implement sustainable development principles in secondary schools through motion leadership?



### **3.3.6 Objectives of the research**

The key objective of this study is to establish what the role of motion leadership is in the implementation of sustainable development principles in secondary schools. The main objective can be divided into the following sub-aims:

- To describe and define motion leadership.
- To explain how motion leadership can support change and improve sustainable development principles in secondary schools.
- To determine the role of motion leaders in the implementation of sustainable development principles in secondary schools.
- To discuss the strategies and recommendations that might serve as guidelines to implement sustainable development principles in secondary schools through motion leadership.

### **3.4 POPULATION AND SAMPLING**

The researcher made use of purposeful sampling in the study. Patton (2015:264) describes purposeful sampling as the selecting of information-rich cases to study, which will illuminate the inquiry question that is being investigated and whereby one can learn and explore a great deal about “issues of central importance to the purpose of the inquiry from a population of school leaders from three secondary schools. These participants are most suitable because one of their core functions as leaders involves the supporting of team members in the implementation of strategies (Sapsford & Jupp, 2006:26). The researcher selected a sample size of nine (9) participants to comprise three school leaders from each of the three schools. She selected one principal, one assistant principal and one classroom teacher from each school to compromise the selected sample. This sampling methodology enhances the depth of the study (Henning *et al.*, 2011:71) because the participants have stakes in the implementation of sustainable development principles in schools. The selection of these participants helped the researcher to achieve the objective of establishing the role of motion leaders in the implementation of sustainable development principles in secondary schools.

### **3.4.1 Informed consent**

In order to ensure that each participant would contribute to her study voluntarily and through informed consent, participants were required to sign content forms (Appendix 3). The researcher embraced the informed consent (Patton, 2015) by providing participants with procedures, possible advantages and disadvantages of the study in a letter to participate in this study (Appendix 3). She also clarified the integrity of the research process, including the possibility of risk, time, data collection activities and the disclosure of confidential information. Participants in the study were afforded the opportunity to seek clarification on unclear issues and were informed that the structured individual interviews were to be digitally recorded. In addition, the participants were permitted to withdraw from the study at any time without discrimination. The aspect of informed consent was based on the understanding that participants were competent enough to make informed decisions by themselves.

### **3.4.2 Anonymity and confidentiality**

Participants have a right to confidentiality, which helps to eliminate the possibility of putting people at risk. The first step was to get ethical clearance from the University of South Africa before any participants were contacted. Creswell (2014) puts forward the importance of obtaining the necessary permissions prior to the study by asking the gatekeepers permission to conduct a study at their school. For this project, the researcher e-mailed and phoned the principal of each school to ask their permission to do research at all three schools in the wider Calgary area. The researcher disclosed the purpose of the study through e-mail and a hard-copy letter (Appendix 4) and then asked participants to sign their permission form.

The researcher ensured the confidentiality of all leaders during my study. She did not reveal the participants and their schools' identities during the study. She destroyed all the recorded data after the completion of the study and used the data only for the intended purpose of the study. Some of the participants requested a copy of the study after it had been completed. She will fulfill their requests and give each of them a copy after the study has been completed and she obtains her degree.

### **3.4.3 Direct and indirect coercion**

All the participants, once asked, volunteered to participate in the study. The purpose of the study was explained and written consent was given by participants (See Appendix 4). The structured individual and non-participant observation would be terminated should the participants feel any discomfort including a perceived threat to their wellbeing. The researcher was accountable at all times for the structured interviews and the observations.

### **3.4.4 Fairness and objectivity**

The involvement of human beings in the study required where possible, the ideals of fairness and objectivity needed to be maintained. The participants and their actions linked to the implementation of sustainable developmental principles are “not on trial”. Neither, are the participants’ characters and self-worth “under attack”. Throughout her study, the researcher established her own personal level of objectivity, irrespective of the circumstances that might arise during the collection of the data process.

### **3.4.5 Ethical measures and considerations**

Researchers have specific obligations when engaged in research studies, such as this case study, where individuals participated as participants in the structured interviews and non-participant observations. The researcher ensured that participants were treated fairly, built a trust relationship with them and ensured that they were not exposed to any undue physical or psychological harm (Cresswell, 2014). Hemmings (2006:12) adds that many different ethical frameworks can promote the “ethical principles of respect for persons, beneficence, and justice”. This was especially important during the structured individual interviews and the non-participant observations not to hurt and harm participants in any way. Ethical clearance was obtained from the University of South Africa, Faculty of Educational Ethical Committee (Appendix 2). In addition, permission to conduct the study in Canada was not necessary to be obtained from the Association of Independent Schools and Colleges in Alberta (AISCA), but directly from principals of the participating schools (Appendix 3 & 4). All identifying information was removed from the relevant documentation because of confidentiality.

### **3.5 INSTRUMENTATION**

This study is a case of the experiences of school leaders regarding the role of motion leadership in the implementation of sustainable development principles in secondary schools. Data collection took place in the form of structured individual interviews with principals, assistant principals and teachers. Document analysis was conducted to check how school leaders lead and implement new strategies at their schools.

#### **3.5.1 Interviews**

Merriam and Tisdell (2015) are of the opinion that the questions of a structured interview are devised before the interview is conducted from a list of questions. Seidman (2013) says there are no absolutes for interviewing and that little research has been done on that. Yet the governing idea is to make the interview repeatable and demandable with a rational approach to it. The researcher is a novice researcher; she therefore chose to follow the guidelines of Merriam and Tisdell (2015), who contend that the structured interview format affords such a researcher the opportunity to gain confidence and experience regarding the interview process. Structured individual interviews were conducted with nine school leaders, who included three principals, three assistant principals and three teachers from three schools. The interviews took place at a time convenient for the participants and the researcher. The researcher used an interview protocol for the structured individual interviews with the school leaders. Seidman (2013) suggests that during a face-to-face interview, the researcher should create friendship-like qualities. That means that both the interviewer and participant work towards a friendly environment before and during the interview. The researcher found that this suggestion helped to discover “deep” information and knowledge from the interviewee.

Prior to the interview, participants were contacted by e-mail after permission had been granted by the principals to contact the participants, and permission letters to conduct research in their schools had been dispatched to them. Participants were requested to sign a consent form before they were interviewed (See Appendix 3 & 4). Once the consent forms had been returned, interview times and locations were established so that the interviews could take place in familiar surroundings to support naturalistic inquiry. All interviews were conducted in neutral surroundings at the respective schools.

The researcher assured the participants of confidentiality and informed them of their right to withdraw from the study at any time. Interviews occurred during the first term of 2016. The three interviews with the principals took place in their offices, while the rest of the interviews took place in a room allocated by the principals. All interviews lasted between 30 and 45 minutes. All participants were asked questions about motion leadership and the implementation of sustainable principles in Canadian schools. The researcher contacted all participants by e-mail and notified them about e-mail attachments of their transcripts sent to them to review. Participants were requested to review their transcriptions for accuracy, correct interpretation and to clarify responses, where necessary. Qualitative validity allowed the researcher to check for the accuracy of the data through certain procedures (Creswell, 2014:201). Qualitative validity checks were done to check whether the researcher's findings were correct or not because of the procedures used (Creswell, 2014:201). This kind of member checking is essential to establish credibility. The identities of participants were protected by giving them pseudonyms during the data analysis and reporting phase of the study (See Appendix 3 & 4)

### **3.6 DATA COLLECTION PROCEDURES**

The researcher introduced herself to the participants to establish a rapport and informed them about the purpose of my study. She was the facilitator during the interviews. She took notes herself during the interviews and operated the digital recorder. She maintained an open-minded approach and skills to elicit information the interviews. The climate was calm and relaxed and she introduced herself to the participants. The participant sat in front of the researcher for better communication and eye contact, as well as to ensure productivity and to feel at ease when disclosing information.

The researcher established the following ground rules before the interviews:

- Strive for clarity, communicate respect and facilitate honest reporting from participant's point of view (Patton, 2015).
- Use words that the interviewee can understand and express himself or herself in.
- Try to avoid "why" in questions to eliminate unclear data. Rather change a "why" question to "what is/if" or something similar.

- Probe questions in various ways, through body language, non-threatening language and having empathy with what they say – all in order to get information from the participants from their point of view.
- Take on a posture of empathy and neutrality.
- Be neutral – do not get angry, embarrassed, saddened, shocked – nothing the interviewee reveals should influence the researcher's judgement of the person, or what he/she says.
- Notes are taken, because a recorder is not enough. Notes help to formulate better questions as the interview moves along (Patton, 2015).
- Notes consist of very cryptic key phrases, making use of abbreviations and informal shorthand.
- Ask the interviewee if a recorded interview will bother them.
- After recorded interview, check recording to make sure it worked (Patton, 2015).
- Have an immediate post-interview review at home after each face-to-face session to note aspects not recorded, like how the interviewee reacted to questions, his/her attitude, etc. (Patton, 2015).
- Always keep the topic in mind, namely the influence of motion leadership in the development of sustainable goals in schools. (Patton, 2015).

The researcher established these rules to ensure that the interviews ran smoothly. She put the participants at ease and introduced the topic to be discussed. She told the participants why she conducted the study. Questions were asked inductively, ranging from ordinary to explicit using a semi-structured interview guide prepared before the interviews. The researcher addressed ethical issues such as confidentiality and asked the participants to keep their responses during the interview confidential. She had to repeat some of the questions to ensure that the participants understood the questions. In some cases, she had to explain the question to ensure clarity of the question at hand. She had to repeat the ground rules on three occasions. The researcher was able to use the instrument to aid herself in the process to collect data.

The researcher practised the use of the digital recorder in rehearsal for the interviews to boost her confidence, to capture data effectively and reduce time-limiting problems.

She used the following techniques for conducting the interview:

- To set the stage for the interview, she got informed consent, let everyone sign the confidentiality forms, was aware of the consequences of not obeying ethical rules and explained her role as researcher to the interviewee.
- The length of time was decided beforehand (Seidman, 2013) – 30 minutes for each interview.
- She did not want to rely on memory and therefore used a digital recorder.
- Made crypt notes because of body language and other incidences during the interview that could not be recorded.
- Asking and answering of questions were asymmetrical, allowing herself to prepare a protocol of questions and to keep the interviewee on track (Seidman, 2013).
- Did not stick religiously to questions, but at times probed for clarifications (so as not to influence the interviewees' answers).
- Recorded deviations from the questions previously prepared for the interview if there were any.
- Kept ethical issues during the interview in mind throughout the interview

During the interview, data were recorded by means of a digital recorder and field notes were taken concurrently to enhance the digital recordings. Recorded interviews were then transcribed. The researcher could understand the consciousness of the participants, because their words reflected their consciousness. By recording, the words were preserved in their original form. The researcher could study the transcribed recordings at home to reflect on the previous interview techniques (Seidman, 2013). In addition, participants were happy that the recorder would do justice to what they have said and they did not have to concern them over what information could be retrieved or not. Participants soon forgot the device once the interview started and therefore the researcher thought it did not affect their responses. The researcher preferred not to use a recorder with a built-in microphone, because it could compromise the sound of the participants' voices during the interview.

Notes helped the interviewer to concentrate on what the participants were saying (Seidman, 2013) and kept the interviewer from interrupting the participant. The researcher could keep an eye on what the participant had already said and thus avoided repetition (Seidman, 2013). Patton (2015) describes notetaking during interviews as written communication that provides a wealth of data to work with. Such field notes are rich, detailed descriptions and provide data on the context from where the interviews were taken. Qualitative reports provide a concept of what has been seen and heard during the interviews. These notes comprise observations, documents, opinions and stories. Patton (2015) suggests that interviews produce direct quotations about their own experiences, their feelings, knowledge and behaviours. The notes serve as a reflection on what has been said during the interview (Willis, 2007). In addition, the notes taken during the interview helped to plan for the next interview if the researcher ran into problems, as well as to help streamline the next interview. Notetaking is important for constant improvement in order to erase certain shortcomings during data collection. Notetaking was done thoughtfully to avoid disturbing the participants.

The researcher considered the following factors to ensure that interviews were successful:

- Permission to use the digital recorder was sought before the interviews and all participants gave their consented that it could be used.
- Use of the digital recorder enabled her to maintain eye contact with the participants.
- The researcher placed the digital recorder between herself and the participant during the recording.
- She arranged with the principal for a room where the interviews could take place without disruptions. All the interviews were completed without any form of disruption.

### **3.6.1 Non-participant observations**

The researcher conducted non-participant observations of principals, assistant principals and teachers going about their leadership practices to enhance her understanding of how they implement sustainable developmental principles at their schools. She observed the nine participating leaders during activities and environment that are commonly part of their daily programme, since the focus of the study was the role of motion leadership in the



implementation of sustainable developmental principles. The principals of the three schools granted the researcher permission to conduct these observations. She took field notes during her observations, which were guided by an observation guide. She observed each participating school and the three participating leaders over a three-day period. These repeated observations enabled her to gain a deeper understanding on the role of motion leadership in the implementation of sustainable developmental principles at secondary schools. The questions that guided her observations are presented in Appendix 6.

### **3.6.2 Document analysis**

Data can be obtained by means of documents. Documents are part of the observation setting. Written material such as documents from the school or education department provides a rich source of data information. Relevant records are observed. In this study, the researcher used documents like the Calgary Board of Education Three-Year Sustainability Plan and the Framework for Student Learning, freely available on the internet. Each particular school that she visited had a three-year plan for success called a school development plan. She studied the Inspiring Education documents and their reflection at each of the three schools. These documents contained many various information such as policies, workshops, plans, etc. These documents were data rich although not direct as to the original idea behind these plans and policies but enough so that the researcher could trace back the links. Because of these documents, the researcher could link the literary study to the documents and observed that the documents are in line with the United Nation's plan for sustainable development in schools in Alberta.

## **3.7 DATA ANALYSIS AND PRESENTATION**

To complete the data analysis, certain steps needed to be completed. The data collection and analysis were described (3.6). Data collected were analysed by means of patterns and themes. In her study, the researcher made use of content analysis. Content analysis "are the categorizing and identifying of patterns and themes". The processes of searching for patterns and themes may be distinguished as pattern analysis and theme analysis, respectively (Patton, 2015:541). This process was suitable for this study because the structured interviews, document analysis and non-participant observations would yield a vast number of notes. This process of content analysis helped the researcher to organise all her notes and themes from the data collected.

The analysis of qualitative data requires an accurate description of the responses of the participants. *Pattern* refers to findings that are descriptive by nature, while themes refer to a categorical form that interprets the meaning of the pattern. Patton (2015:199) argues that, through content analysis, one can gather meaningful findings. Content analysis makes sense of multiple interview transcripts and pages of field notes to identify major patterns of outcomes from separate cases (Patton, 2015:199). This involved sorting responses of interviews into broad patterns. These patterns were divided into themes. The categories of patterns were further divided into sub-patterns and points of comparison were extracted in order to draw conclusions from the data of the responses of participants, non-participant observations and document analysis. The reliability of coding patterns was assessed by checking for contingency between different coding points.

### **3.8 TRUSTWORTHINESS IN QUALITATIVE RESEARCH**

Research findings should be credible to the community (Creswell, 2014). According to Creswell (2014), validity does not carry the same weight in qualitative research as in quantitative research. Although this may be the case, the researcher needs to check for the accuracy of the findings by using certain procedures. Such procedures can be interrogative statements that spur on deep and full answers to questions. During data collection, participants had the freedom to explain their experiences in whatever way they liked. This helped to identify topics that the researcher did not cover in depth in the literature study.

Yin (2009) suggests that reliability will be enhanced when consistent procedures are used. In addition, qualitative researchers argue for new vocabulary and new rhetoric in which they could discuss validity (Seidman, 2013). When participants respond to questions, the researcher should ask him/herself whether the comments are valid, which helps to place the participants' comments in a context (Seidman, 2013). It helps to interview a number of participants. Eight participants aired their experiences in this study, allowing the researcher to connect these experiences and compare the responses of all.

#### **3.8.1 Credibility of this study**

Patton (2015) holds the view that document and transcripts analysis, excluding assumptions and reflective of the participants' responses would ensure the reliability, validity and trustworthiness of research. Participants were allowed to explain their

experiences during the collection of data. This could contribute to identifying topics for further study into any related topics or areas of concern as expressed by the participants. Patton (2015:652) also points out that by using triangulation, which involves the accumulation of multiple opinions and then analysing it through interviews, document analysis, site visitation. The researcher ensured that the study was conducted in a reliable manner. It was important to determine whether the results were consistent with the data obtained. She made the transcribed interviews available to all the participants of the study to verify the accuracy of information. She also applied the same interview structure with all nine participants during the interview process. Yin (2009) maintains that the first objective to ensure validity is to perform qualitative research in an accessible manner. During the study, the researcher improved credibility by clearly defining the goals and objectives of the study to all participants during the interview process. She documented these procedures in such a way that it could be reviewed and understood, and made every effort to ensure that teaching and learning were not affected at the participating schools during the study.

### **3.8.2 Dependability**

Critics of qualitative research often wonders about the reliability of the research pondering about whose meaning at the end was it really and is that even reliable (Seidman,2013) but if the research was done thoroughly, the data will be declared dependable. The researcher enhanced dependability by employing overlapping responses during the interviews from the various participants. She also enhanced dependability of their responses to compare that with the literature review in Chapter 2. The researcher thinks that there is plenty of evidence in the literature study to determine the validity of the participant's experiences. Worldviews of participants played an important role because that create a mental setting from where the participants shared their experiences. The researcher asked each participant what their worldviews were and how ready they were to change the worldview, should the need arise. This gave participants the chance to reflect on their own philosophies and judgements and gave the interviewer a bird's-eye view on how to interpret their insights. As a method of inquiry, these interviews gave participants the chance to make meaning through language and allowed the researcher to draw conclusions from the participants' stories (Seidman, 2013).

### **3.12 CONCLUSION**

This chapter explained the paradigmatic approach that was applied in this study. The research design, sampling strategies, data collection, ethical considerations, data analysis and data interpretation were explained. Reliability, trustworthiness and credibility were also discussed, as they serve as important quality criteria in this study. The next chapter will contain the data analysis and interpretation of data.

## **CHAPTER 4: DATA PRESENTATION, ANALYSIS AND INTERPRETATION**

### **4.1 INTRODUCTION**

The aim of this study is to see what role motion leadership plays towards sustainable development. The previous chapter reviewed the qualitative research design and methods on what the role of motion leadership is in the implementation of sustainable development principles in secondary schools. One of the documents studied in preparation for the interviews of this research study on education for sustainable development (ESD) states that in Canada “many partners from across sectors have joined efforts to make ESD a reality” (CMEC, 2014:20). The current chapter aims to determine the role of motion leaders in the implementation of sustainable development principles in secondary schools. The sub-question is also discussed, namely what is a systemic worldview and how does systemness support change in Alberta schools. There were nine participants; however, Participant T3C withdrew from the study. Therefore, data were not collected from the T3C. Data were gathered and pieced together through eight face-to-face interviews with participants. Although the participants did not know the researcher well enough to trust her, their professionalism allowed them to feel confident enough to reveal their understanding of the world as seen through their own eyes. Data were also gathered through documentary research in the form of online websites and documents as well as video clips by the educational department. The researcher relied on triangulation (see Chapter 1.8) to enhance the credibility of this study.

### **4.2 INTERACTION WITH THE PARTICIPANTS**

The researcher chose to have short, to the point, face-to-face interviews with participants. Regarding of the short timeframe, the participants felt motivated to share their experiences in a positive way. Eight participants from three different independent schools signed the consent forms to grant face-to-face interviews at their schools that lasted for around 30 minutes. This sample comprised three schools, randomly selected in and around Calgary in the province of Alberta, Canada. These participating schools were selected because of their close proximity to the researcher’s home. All these schools are government funded. The schools are private and separate schools, but function under the same Alberta curriculum of studies like the public and Catholics school districts, which falls under the ministry of Alberta education. Most of the participants also work in public schools for

extended periods. Participants told the researcher that it was not uncommon for staff members to move between public and independent schools, depending on where they got a job first. The participants all taught at different levels. They come from a wide variety of backgrounds and have different levels of years of teaching. One of the schools targets high-level academic students from the international baccalaureus programme (IB); one school is religious and the other is a private school focusing on a unique class setup, also accommodating secular home-schoolers on the side. All three schools indicated that they often sent teachers to these events and conferences in order to mingle with a diverse group of people on educational issues in Alberta and globally. Teachers from Catholic, public and independent schools typically belong to the Alberta Teachers' Association (ATA). The ATA is a union and member of the Alberta Council for Global Cooperation that strives to achieve and infuse sustainable development into schools by the year 2030.

### **4.3 BIOGRAPHICAL DATA OF THE EIGHT PARTICIPANTS**

Data collection came from the three participating schools – each represented by nine participants – which were then analysed and presented. During the qualitative phase of this study, the participants had to complete a brief biographical questionnaire before the interview would take place. Information about participants' age, gender and years of teaching experience was gathered. The idea was to have three participants at three schools but unfortunately, one of the participants no longer wanted to participate.

There were eight participants in total from three schools from the greater Calgary area. The schools are independent schools, although they are funded by Alberta education. They also follow the Alberta curriculum like all other schools in the province.

The principals from each of the three schools participated in a face-to-face interview. Of the three principals, two were men and one a woman. Two of the three school principals had over 25 years' teaching experience – the female principal had 25 years' experience and one male principal had 38 years' teaching experience. The third male principal had eight years' teaching experience. All three these principals are between 37 and 62 years of age.

There were three assistant principals in this study. Two of the assistant principals were male. The male assistant principals had 22 and 16 years' teaching experience, respectively,

while the female assistant principal had 10 years' teaching experience. All three of them were between 40 and 45 years of age.

There were two participating teachers, one at each school. Both teachers were female and one had four years and the other two years' teaching experience. Both of them were between 25 and 40 years of age. One of the three teachers withdrew from the study because the school did not want to allow an additional person to participate in the study due to time constraints.

All three schools are part of a wider district, with each one of the schools part of a different school district. What they do have in common is that they follow the Alberta Education curriculum and go to seminars, training courses and leadership symposiums presented by Alberta Education. They are under the supervision of Alberta Education. In addition to that, they are also part of the Association of Independent schools and colleges in Alberta (AISCA).

None of the biographical data is of concern to the outcome of this study, except maybe the years of teaching experience, since that may be an indication whether participants were familiar with the new worldview of systemness versus silo teaching of the industrial era.

#### **4.4 DATA ANALYSIS AND INTERPRETATION**

Qualitative data use words rather than numbers to explain the role of motion leadership in schools. The role of motion leadership is to implement sustainable development principles in secondary schools. The research was conducted in the natural environment of the participants. This design is rich and holistic, as it focuses on the lived experiences of the participants. Qualitative research is itself interactive, as the method of obtaining information involves one-on-one interactions between the researcher and the participants.

The coding related to participants are as follows:

P for principal

AP for Assistant principal

T for teacher

1 for school 1

2 for school 2

3 for school 3

Seidman (2013) states that interviewing is not only a research methodology, but also a social relationship that must be nurtured. The researcher tried to nurture the relationship during the interview to put participants to ease that helped them to share their experiences more freely. Although the researcher had a single interview with each participant, the researcher tried to stay clear of a “I-Thou” relationship (Seidman, 2013:97) in order not to see the participant as an object, but to nurture the relationship in a semi we-relationship, just enough to not be an equal participant and have a conversation instead of an interview. The distance allowed the participants to share their experiences in their own unique way. The researcher gained many new insights from the interviews and from studying the online documents and thereby traced the connective threads between the data analysis and literature study in Chapter 2. The researcher found the literature consistent with the interviews and document analysis. Quite surprisingly, strong links between literature study and data analysis were evident to the researcher. However, the researcher kept in mind that it remained the interpretation of the researcher and therefore it was subjective (Willis, 2007).

**Table 4.1: Summary of themes and sub-themes derived from the data**

Theme 1 – Motion leadership creates systemness
Sub-theme 1 – mental health
Sub-theme 2 – social capital
Sub-theme 3 – trust is the social glue
Theme 2 – Motion leadership gives forward motion from ego to eco awareness: personal-an relational inversion
Sub-theme 1 – deep learning
Sub-theme 2 – mindfulness
Theme 3 – Move towards eco-awareness: institutional inversion
Sub-theme 1 – influence of the organisation’s perception on sustainable development principles

The relationship between the themes and sub-themes are closely interrelated as indicated in the literature review in chapter 2. By developing and nurturing mental health, social



capital and trust as indicated in sub-theme 1-3, each individual act as an open system. Theme 2 has two sub-themes, 1 and 2. They describe the social entrepreneurial skills, creativity and innovation towards social justice. The moral purpose of the whole is to serve the planet or the collective as discussed in the literature review. Important to note that even though the common grammar and values of the collective should be the same, that diversity remains of paramount importance. Social capital can be built as discussed in theme 1, only when there is a diverse group of people especially when everyone maintains a growth mind set and recreate and innovate new knowledge constantly. As discussed, closed systems and systems that stagnate cannot be accommodated or else the system will perish.

The individual or what Covey (2008) calls *the leader in me* is first of all conditioned to manage themselves, ever regenerating themselves in creative and innovative ways. Self-management or self-creation is an ongoing process as mentioned in chapter 2. Personalized learning in the form of wellness programmes such as meditation and self-talk, laying off old believes and always adapt the self to take on new ones as the system requires is a process. Balancing the individual and collective remains a process to keep generating new life. Theme three touches on the movement from individual change to institutional change whereby collective intelligence on a global scale gives life to the parts. Constant change of knowledge requires the whole system to be adaptable in order to rearrange the patterns and systems as required.

In the above section, the analysis of the data was discussed. The researcher identified three themes and six sub-themes. A discussion will now take place about the first theme, namely a systemic worldview created by motion leaders for education for sustainable development.

#### **4.4.1 Theme 1: Motion leadership creates systems**

The ultimate idea of education for sustainable development (ESD), (UNESCO 2017) is to develop a connected community whereby all, meaning not only the students, but also everyone in their community, province, etc., becomes globally interconnected. The researcher went to the schools, assuming that the participants knew that already. According to one of the ESD documents analysed by the researcher, the researcher noticed the effort

to establish networks for sustainable development. A blueprint for Alberta education, Education 2030, states,

The aim of the 17 SDGs is to secure a sustainable, peaceful, prosperous and equitable life on earth for everyone now and in the future. (UNESCO, 2017:6). Everyone, all the living, is included in the planetary system.

Fullan (2017) describes systemic leadership as constant leadership which is a leadership style that refers to leaders who create deep change by mobilising other leaders to the same at all levels of the system or, simply put, leaders who first of all develop themselves and then others around them to also do the same (Fullan,2017). Building systems in schools, according to Barnard (2013:127), has to be “carefully choreographed”, such as breaking the linear structure of teacher student and bring in horizontal structure. For instance, one should bring in mixed-age groups of students together; diverse students based on factors such as need, ability, gender and ethnicity. In the group, students, teachers and family gather around a common factor and influence one another.

Participant: P3 commented,

*We certainly work with other schools for example who are other IB schools to develop a continuum curriculum from K-12 that's integrated and we share ideas about how to do that. We visit other schools, we have other schools visit our school to see what we participate with other schools around ... we collaborate with other independent schools around student leadership, innovation and things like that.*

At the school of P3, they create opportunities to become connected with other schools. Making the effort to go and visit other schools and others visiting them, people in each of these systems become interconnected through project-based learning such as in this case, developing

*a continuum curriculum from K-12 that's integrated and we share ideas about how to do that.*

By interconnecting all the smaller systems such as the example above, motion leaders in Alberta lead change on a grand scale across the province by providing a huge system wherein all the smaller systems function. CMEC, (2014:52) states,

broad tent approach to education for sustainable development that encompasses early adopters and implementers of environmental education policies ... the emphases on environment, social and economic dimensions of education for sustainable development.

From this quote, it is clear they aim to wipe out the world's three divides (Scharmer, 2009; Senge, 2006, Figure 2.1) and can only be overcome by sustainable development to make everything one. Figure 2.2 illustrates humans that see themselves as part of the whole network of the living earth (Capra & Luisi, 2014:14). Figure 2.3 of this study demonstrates how the "broad tent" approach plays itself out in the province.

Another participant, P1 added,

*So we do want to see each other succeed because when we see each other succeed, then the school succeeds. People are very willing to share ideas and if someone learns something new, they are very willing to teach someone else how to do that... I know certainly like four teachers that are involved with like professional development of activities, we are dialoguing with teachers, like either in like charter schools or catholic schools or public schools*

Hargreaves, Boyle & Harris (2014:160) describe a motion leader as the "one that elevates everyone and their performance to a higher level," something P1 referred to when saying

*We do want to see each other succeed ...*

Motion leadership system players and change agents (Fullan, 2014) also motivate others to become innovators (Fullan, 2013), where they all create context or systems.

P1 experienced that people at their school had open minds, hearts and wills (Chapter 2.5.2.3) and therefore were open systems (Figure 2.5; 2.6; 2.8)

*people are very willing to share ideas and ...*

It is through these highly complex systems – open systems such as open hearts, minds and wills that sustainable development principles (as stipulated in ESD; Agenda 2030 & Agenda 21) will circulate on a continuous basis (Capra & Luisi, 2014). Whenever problems in the system arise, they are solved in every moment of now, moment by moment. Because of a constant reacting and doing, the system continuously evolves to shape and form ever-changing new patterns and shapes, helping to keep the planet sustainable (Capra & Luisi, 2014; Stewart, 2016). Fullan (2017) states that such connectedness where a leader

promotes the self and that of others, then becomes a large part of asking “Who am I?” and “What is my task?” (Chapter 2.5.3; Scharmer & Kaufer, 2013). Fullan (2017) says that is when one will know why one is on this earth, namely for one’s own good and for others and ultimately for the survival of the planet (Capra & Luisi, 2014). A motion leader, on the one hand, creates learning experiences and on the other hand “shapes the conditions for all to learn on a continuous basis” (Fullan, 2014:9). Fullan (2010; 2013) describes motion leadership as a catalyst for positive leadership to propel individuals, organisations and whole systems in a forward motion into the future.

Participant: AP2 explained,

*Or they could work with a peer, and work together on it. Or if they know they’re not very good at it and they want some help, then they go to command. So, command is teacher teach me but by the time the students get to command, many students have gone self-directed or peer partner, so you’re working with a smaller group by the time they get to command.*

The role of motion leadership is therefore to act as a catalyst for building and sustaining systems whereby sustainable development principles can flow through whole systems at the same time. Creating context means to flip learning experiences so that the teacher no longer acts as instructor, but as change agent to create a creative and innovative learning experience (Fullan, 2013) and therefore produce more motion leaders. The same is true for principals whose role it is “to maximize the learning of all teachers and in turn of all students” (Fullan, 2014:6). According to Fullan (2014), principals and teachers who know how to build systems where learning occurs by motivating themselves and working with their peers see rapidly accelerating change. Systemic thinking is discussed in both Chapter 1 and 2 (see Chapter 2.1-2.5) in detail. Motion leaders know what impact they have on everyone around them (Fullan, 2013).

P2 added,

*So, teachers working with teachers from other schools and get an ideas from that other school and other program, and try and implement it.*

Leaders can build capacity by allowing both teacher and student to learn as they go without having to fear judgemental comments or critique and can feel free to make mistakes and correct them. Learning by doing helps everyone to learn what the solution to a problem is.

Research evidence showed a strong relation between school culture and teacher culture with a sustained focus on improvement. Motion leaders build a strong habitat or system to improve learning for sustainable development.

Participant AP3 described,

*Our older kids have every opportunity to lead and mentor our younger students. We are strategic about setting up opportunities for that.*

Fullan (2013) highlights the role and influence of peers, the feedback loops that takes place among and through them and mentions the “undisciplined possibilities of the web” and “the unassisted discovery” (2013:48) that will benefit the system (Fullan, 2013:48). Developing the group (Fullan, 2014) means to foster collective wisdom for sustainable development, clusters of people work and learn together. One uses the group to change the group. Habits and habitats go together – when students and adults are taught the right skills and habits but put into the wrong environment, they cannot function correctly (Covey & Covey, 2008). Collaborative working culture in a school is crucial.

Participant T2 stated,

*We are invited in that process in terms of like making the goals more tangible and like smart I guess you could say, and this year too one of the things that they did was kind of say, okay we are setting these goals maybe at the division level, how is this going to influence one of your goals on your teacher professional growth plan? and so they are seems to be a greater level of accountability sort of built in to like working together to meet a certain goal related to student learning.*

Leaders can build capacity by allowing both teacher and student to learn as they go without having to fear judgemental comments or critique and can feel free to make mistakes and correct them. Learning by doing helps everyone to learn what the solution to a problem is. Research evidence showed a strong relation between school culture and teacher culture with a sustained focus on improvement. Motion leaders build a strong habitat or system to improve learning for sustainable development.

Participant AP3 described,

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Interpenetration at this school brings people from all ages together, young and old. Participant AP3's school broadened on their investment in intergenerational learning and that they plan it strategically, for instance they will take outdoor trips in nature where Grade 9 learners get an opportunity to experience leading younger learners. These types of network building strategies help everyone in the system to practise their competencies and have a positive influence from other leaders and themselves to adhere to strengthen networks.

Participant T1 mentioned,

*one kid might have one skill set, another kid might have another skill set, and they're going to kind of combine powers, if you would, in order for a better understanding of a concept, so it's using all the ideas and ultimately being collaborative in their approach.*

Learners in this classroom prove to have productive conversations and do not advocate their own views so strongly that the other students cannot be heard. They look at problems from the perspective of the system as a whole (Senge, 2006). Learners do not assume that their view is the only right view but, as T1 said, they demonstrated the ability to collaborate knowing their actions were interrelated.

#### *4.4.1.1 Sub-theme 1: Social capital*

### **IT'S A PROCESS –THE NEVER-ENDING JOURNEY**

To create a world that is more just, peaceful and sustainable, all individuals and societies must be equip with and empowered by knowledge, skills and values as well as be instilled with a heightened awareness to drive such change. There is now a growing international recognition of Education for Sustainable Development (ESD) as an integral element of quality education and a key enabler for sustainable development (UNESCO, 2017)

Social capital allows individuals to work together to serve the whole, meaning it allows people to accomplish that which they could not do on their own (Katz, Earl & Jaafar 2009). Because the world is in the process of becoming a networked environment, it has a profound impact on all individuals. UNESCO (2017) sets out 17 sustainable development

goals for each individual to adhere to and for the world and as the above quote illustrates, individuals need to be empowered to make this change to sustainable development a reality and that certainly requires brilliant motion leadership skills. “For the goals to be reached, everyone needs to do their part: governments, the private sector, civil society and every human being across the world (UNESCO, 2017:6).”

Building networks is not enough, as explained by Katz, Earl & Jaafar (2009:7),

bringing people together does not necessarily produce better outcomes, unless the collaborative work is organized to engage people in the process and is supported to move them beyond their established patterns.

Respondents indicated they worked together with other teachers, schools and the community at various times and places. None of the respondents used the words ‘social capital’, although they described social capital in terms of peer learning, teachers collaborating, integration, etc. Fullan and Edwards (2017) also point out that superficial collaboration is not going to bring about change; what is important is when people focus deeply on the best practices that help to build change by working together towards one goal. Social capital is a vehicle to create dense systems and civic engagement for sustainable development. Katz, Earl and Jaafar (2009) suggest that forming relationships has to encompass deep interaction that allows individuals to open minds, hearts and wills, opening their beliefs and practices to investigate and debate. That means, individuals in the network need to form intensive interaction between the self and Self. Eighty percent of the participants used the concept of open will, heart and mind during the interview. It was not clear to the researcher whether they made a connection between social capital and deep learning. Social capital (Edwards & Fullan, 2017) is strongly linked to human capital, because social capital refers to the quality of the group while it also develops individuals (human capital) – the one cannot function without the other. Two of the participants mentioned that individuals had to be connected to the group to be effective.

Bridging and linking capital creates strong systems (Table 2.1; Figure 2.12; Scharmer, 2009; Dweck, 2006), whereas bonding capital breaks up systems (fixed mind-set, Dweck, 2006). Fullan (2010) states that leaders enable, facilitate and lead peers to interact in a strategic way to interconnect with others different from themselves. “The boundary between the school and the outside is becoming more permeable”. (Fullan, 2014:97) As discussed

in Chapter 1.11.6, motion leaders have a strong ability to engage people inside and outside the school setting in two-way partnerships. Chapter 1.11.5 discusses the idea that the leader is one node on the network of communication, acting as an open system, passing and receiving information on from one to another person, from where information circulates throughout the system.

Note the danger of a closed system as seen in Figure 2.12 (also see Figure 2.5; 2.6; 2.8; 2.11). All system players should have permeable boundaries to act as open systems on a continuous basis (Capra & Luisi, 2014) and that goes for the smallest system (the individual) as well.

Social capital (see Chapter 2.6) can either build or destroy a system within a system and potentially the whole earth (Capra & Luisi, 2014; Senge, 2006; Barnard, 2013). All systems sit in larger systems and as Senge (2006) points out, it is not possible for one system to be sustainable if the others are stuck in destructive habits. In order to sustain the energy and momentum of even the smallest system, motion leaders dare not form bonding social capital (Table 2.2;) or what Dweck (2006)(Figure 2.12) calls fixed mind-set or stuck in one's own skin. System citizens (Senge, 2006) stuck in their own groups destroy any chances of downloading new values and behaviours. In this case, sustainable development principles that stand in opposition to the industrial age's idea of the world consist of different parts. Fullan (2014:99) is of the opinion that leaders should always occupy themselves with "building external networks and partnerships" – when schools listen to one another, they expand the possibility to redesign the way in which they operate (Barnard, 2013). Such developing of ownership with others (Fullan, 2014:147) became evident when speaking to the participants as seen in the following examples:

Participant AP2 said,

*I believe the diversity all contribute to the learning environment, and if you keep your doors closed and only teach with the curriculum then that's all you're going to... that's all the students are going to get You need to bring in other pieces, and those definitely come from the community.*

AP2 realised the importance of diversity. Diversity drives bridging and linking social capital. The participant also realised that one needed a diverse input from the community to build bridges across systems and eventually linking systems towards a greater holistic system,



(see Chapter 1.11.5). Katz, Earl & Jaafar (2009:8) warn against groupthink, saying that a group of people with the same values and ideas having a discussion already had high agreement among themselves –

*sameness will trump diversity. And beyond these psychologically grounded dangers of the collective, we also have to worry about quality control. That is, when left to their own devices, networks will spread anything – and not necessarily what is worthy of sharing.*

Participant T1 experienced that,

*when they are confronted with new ideas they tend to sort of want to bolster their defences to sort of come and like and protect their own views.*

This participant mentioned that some people at their school were stuck in a fixed mind-set (Figure 2.12). Such bonding capital does not allow motion leadership to be functional and systemic thinkers believe that bonding capital causes a destruction of the system (Table 2.2). Katz, Earl & Jaafar (2009) say that it is beneficial to the group if they inject new ideas, because it opens up a range of possibilities for the group to choose and help them solve problems but it can only work when there is benefit for the collective.

Participant P3 said,

*I think our students learned more about other students' culture more than what they learned about mathematics.*

Students at their schools often go to places with very different cultures from the Canadian culture. The participant illustrated that the students built bridges with others different from themselves.

Participant AP3 explained,

*a lot is through service experiences – our kids joining with other schools on a trip to Costa Rica or Guatemala and there would be many other schools so our kids work hand in hand shoulder to shoulder with kids from other schools.*

This is also an example of bridging capital, when heterogeneous networks reach out to one another (see Chapter 1.11.5).

Finding common ground between different people makes social capital very functional. AP1 experienced exactly that:

*when you are at like a conference with other teachers who aren't necessarily (thinking the same as us) then you find common ground.*

Participant P1 said,

*we do have a multicultural fair, and that was very positive, very successful and we had many different nationalities represented with food and culture and activities and now we also have a club that is called "Margin" and they discuss the tough issues.*

Motion leaders create strategies and opportunities to bring people from diverse backgrounds together to create inclusive structures.

Participant P1 also created opportunities to build strong networks, creating habitats wherein habits can be renewed and evolve,

*We have our own tricks, steps and tricks to get them engaged, but ultimately the onus is on the student to find a way to be engaged, to find interest in something that maybe you're not all that interested in.*

#### *4.4.1.2 Mental health*

Mental and wellness programmes at Alberta schools want to transform learning environments by building communities where unacceptable behaviour will not be tolerated. Unacceptable behaviour in this case refers to those who do not promote sustainable development principles through their interactions in the group. Behaviours are those six deep learning skills that each person needs in the system, namely certain character skills suitable to the system, proper communication skills, open wills to demonstrate creativity and display critical thinking skills. According to a document by the Alberta Government (2016) on mental health, mental health is a state of well-being in which every individual realises his or her own potential, and gives a chance to everyone to contribute to his or her community. Alberta Government's framework for K to 12 stipulates that the vision of wellness education in Alberta is to develop transdisciplinary learning experiences such as teaching everyone how to act in the right way that will benefit the group; to take

responsibility; and be accountable for their actions and their words as well as what impact that will have on the whole system in which they operate.

Mental health programmes stimulates civic engagement by providing “connective tissue” (see Chapter 2.2). Chapter 2.2 refers to mental awareness and the possibility thereof to build networks, dense social capital that promotes social responsibility to the planet. Senge (2006:3) believes community building builds learning organisations, meaning when leaders see “ever new and expansive patterns of thinking, are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together”. The researcher studied various documents by the Alberta Education Department such as Restorative Practice, Safe and Caring schools and communities to understand why mental health takes centre stage at Alberta schools. The conclusion is that all these mental and wellness programmes ultimately help to reduce social barriers among people in and outside the school. Breaking down walls between people and organisations build dense, interconnected systems with double-loop feedback loops between them all. The aim is to build a restorative culture whereby schools, group homes and all other organisations in a community focus on building relationships and learn to repair damaged relationships. Another one of the documents studied, Education 2030 (UNESCO, 2017), provides some pointers that schools can use such as “invite speakers who have experienced violence based on gender identity or sexual orientation”; partner with groups from other parts of the world where the approach to gender may be different; develop an enquiry-based project.

Participant P2 said,

*we will work with the families to either with our school psychologist, who is part time school psychologist, to get them support or we will meet with the parents to recommend that this student seek professional health and we have just had some seminars and sessions on issues of mental health.*

Mental health programmes develop strong relationships between students, teachers, parents and community. System leaders find ways to help connect those who know and those who do not know the ways of the system – “knowing what we knew but didn’t know that we knew” (Senge, 2006:343). Jacobs and Alcock’s (2017) advice is to refresh the idea of what leadership means for those upholding the status quo of the ‘world-consists-of-parts’ people. They advise to embrace a lateral leadership approach to create sustainable

partnerships that is collaborative on an ongoing basis. This ties in with what Capra and Luisi (2014), and Scharmer (2009) states say (see Chapter 2.3), namely that to foster an interconnected planetary mind-set whereby the self and Self, self and nature and self and other function as a holistic system. Motion leadership targets large-scale efforts to bring about change. One of these school-design patterns (Jacobs & Alcock, 2017) is mental health, which these writers describe as patterns that leaders create for high performance, which include health and safety and community-connected patterns.

Participant P1 also stated that mental health created community as discussed in the paragraph above by saying,

*talking with the counsellor or, or just I think more broadly having community, having someone where you can verbally articulate and express what is bothering you.*

Overall, participants were aware that mental health builds community. The researcher studied one of the documents by Alberta Education called the *Working Together: Collaborative Practices and Partnership Toolkit* (2013:7) designed for educators and other partnerships that involves integration and collaboration across various systems. Linking capital is strong and through this document, it is clear that the focus lies on networking, cooperating, collaborating and integrating of all stakeholders. Mental wellness builds strong social capital because motion leaders build strategic coalitions among various boards.

Participant AP 2 shared that

*we have a support system set up for the students and many of the students, junior high and high school are generally using it the most right now, junior high and high school are generally using it the most right now... it's a system of trust that they have built with the executive director who has the time to sit down and go through, just chat with them about what's going on, but they can sign, all they have to do is get a sign off from their teacher and they can sit and talk about what's going on and what's going on in their personal lives, and how it's making them feel We have a definite system set up for that, because there is a need.*

Alberta schools have a what they call in their document "universal supports" (Alberta Government, 2017:23), which exist of frameworks and plans to create caring and safe learning such as social-emotional learning and positive behaviour supports. Such support can show compassion, demonstrate interest in each student, and grant opportunities to speak to someone about anything. "Many universal supports that enhance positive mental

health can be naturally embedded in day-to-day activities and practices across the school day” (Alberta Government, 2017:23).

Participant P3 said their school used animals to help relieve stress at school, especially during exam time.

*There has been some movement whereby we brought in some puppies.*

This participant mentioned that they made use of puppies to help reduce stress in students during exam time. Alberta Education has a ‘kindness to animals programme’, the every living thing organisation, whereby they try to reconcile the relationship between humans and the natural world to shape overall attitudes and beliefs for sustainable development. That encourages positive relationships with other living beings and our common home, the earth, the aim of human education, called Humane Education. The school system, Alberta Education system and the SPCA link together to create this particular mental health programme. Links across the two systems make these systems move in harmony with one another or what Senge (2006) refers to as systems within systems. One can see how systems link with others to form a greater holistic system. With all the mental health programmes, a strong consensus through discussions take place to create infrastructure.

Participant P2 said,

*Some of them are on specialised learning programs for issues of mental health, diagnosed issues, we have students who are having issues of mental health you know sort of depression, anxiety and we try to support all these learners as to the best of our ability. Where there is a professional diagnosis it is very helpful because then we can well we know more about the situation for the student and we are able to put them on an individualised program plan to support their learning needs and the teachers are able to make accommodations. When they are not diagnosed professionally, then we will work with the families; either with our school psychologist, who is part-time school psychologist to get them support or we will meet with the parents to recommend that this student seek professional health and we have just had some seminars and sessions on issues of mental health.*

From what the researcher heard, this particular school caters for various students’ needs according to what Alberta Education suggests, under the following support – universal, targeted and specialised supports. Various stakeholders get involved and dense systems within systems develop. This is ideal for motion leaders to work through the systems to

spread success for life-long learning. Such moving forward in education for sustainable development becomes a reality through strategies that build an education system that is “inclusive, strengthens capacity and shares responsibility with education partners for the well-being of all students” (Alberta Government, 2017:27).

#### *4.4.1.3 Trust is the social glue*

Trust becomes critical to the success in secondary schools. Motion leaders need to cultivate trust in schools. According to Katz, Earl and Jaafar (2009), capacity building for such community building allows the leaders to be more willing to innovate and take risks (Robinson, 2011:34). Consequences of high relational trust, according to Robinson (2011), are better reaching out from schools to parents, enhanced commitment between different stakeholders, and a positive attitude to innovation. Great teams start as a group of individuals and it takes time to form a group of great team members. Great teams learn to work together towards a particular purpose and therefore need to be able to trust the other to provide shape to their team. Fullan (2010) argues that a non-threatening environment allows trust to develop, especially when team members do not judge each other. To Fullan (2010), interaction with peers and trust is a “must” if one wants to implement the new without resistance because when people trust others they are willing to observe and reflect what they do (see Chapter 1.10.4) and that brings change. Team building is to know how to create an environment in which people trust one another. A high-performance culture stands on a basis of trust (Fullan, 2017).

From the interviews, it became evident that participants demonstrated an ability to trust others, which means that trust build and maintain relationships, which leads to dialogue and discussion to create a deep trust whereby people collaborate and also reflect on their process of collaboration (Senge, 2006). Participants largely shared their desire to trust others. Some others gave their opinions on how they handled trust on a situation-to-situation basis. Participant C was hesitant to put too much trust in colleagues and parents at school; as persons got older, it became harder to trust regardless. The majority of the participants had no issue with being trusted and trusting others, while Participant P1 gave a 5/5 score for him/herself trusting others (Chapter 2.3). Scharmer and Kaufer (2013) point to personal, relational and institutional inversion whereby all systems in the world are seen as a system (Meena, 2013) in Chapter 2.3 and from what the researcher observed from

these participants is that the level of trust in their own personal lives are on the middle to high end. This is what the participants had to say about trust:

Participant P2 gave him/herself a 4/5 when asked how much people trusted this person,

*Well, a 5, for some reason people love me.*

Participant AP1 experienced,

*professionally I think the staff trust each other like probably a four*

Participant's AP2's viewpoint was that

*I think it was like strangers can be trusted dependent on the context in which you meet them*

Participant AP3 said,

*I think I start from a place of trust*

Participant T1 mentioned that,

*I feel like as I get older I don't tend to willingly to give strangers the benefit of the doubt but it really depends on the context in which I am meeting them.*

Participant T2 uttered the idea that,

*I trust the majority of the parents – there are just as few that are not so trustworthy*

#### **4.4.2 Theme 2: Motion leadership gives forward motion from ego to eco awareness: individual and relational inversion**

live with space and silence,  
see the big picture,  
have a vision, learn from failure,  
be a good Samaritan, reframe and stand back,  
advance to the edge (Barnard, 2013:159)

The fundamental change to sustainable development is a change of metaphors, namely seeing the world as a machine (ego aware) to understanding it as a network (eco aware) (Capra & Luisi, 2014:452). Eco awareness means the self sees itself integrated by the Self – no longer standing outside the system, but being infused into the system. This is what

eco awareness means; it demands the dying of the self. Scharmer and Kaufer (2013) rely on Nietzsche's thoughts that say human thought can be taken to the edge of death and rebirth. Moving from one worldview (industrial era) that is dying to another (Agenda 2030) to be born points to individual – as well as relational inversion or what is known as inter- and intrapersonal relations. Motion leadership of today is an ongoing process that calls for a moment by moment rebirth – or what Fullan & Edwards (2017:kindle loc413) call, “purposeful day-to-day interaction to help people learn to talk the walk”. Such communication sends messages to the others around them and they influence one another's actions, skills and purpose. Through motion leadership, the culture moves from one worldview (industrial era) that is dying to another (Agenda 2030) that is born. Cultural change means that individual, relational and institutional inversion takes place, which calls for a sustainable society.

The meanings that the participants in this qualitative research ascribed to human experiences (Cresswell, 2014) concerning individual and relational inversion (see Chapter 2.2.5.2) vary a lot; yet at the same time, all participants saw the value of seeing experiences from another's point of view and what value it holds for their own lives (see Chapter 3.3.1). After the interviews, the researcher realised the participants understood the value of leaders helping others to learn, including themselves. In this study, the researcher built from particular to wider themes (Cresswell, 2014). The researcher explored alternatives to the structure and procedures (Seidman, 2013:25) of each particular face-to-face interview, but always maintained the structures and procedures in such a way to get to the particular answers the researcher was looking for. A few of the participants were reluctant to answer questions because they did not understand or know what to do with some questions. Therefore, the researcher had to build questions around the main question to stimulate responses from the participants. That is why the answers in this section vary a lot. Working together became the culture in Alberta. This study made use of the interpretative approach (Wilis, 2007) whereby the feelings and interpretations and definitions as seen above developed a holistic account of motion towards ego to eco awareness. In Chapter 2, some strategies for motion leadership towards change were set out. The first was (Wilis, 2007) a move from personal (ego)-awareness or personal change to the second strategy (Wilis, 2007) to a third, namely eco-awareness (relational change).



Inversion takes place in the now, known as a holding space (Scharmer, 2009). Stillness, mindfulness or meditation happens here when the self waits upon what wants to emerge. Individual inversion takes place when thinking, feeling and doing is opened up for a personal journey from self to Self. Relational inversion is seeing the self through the eyes of others (Scharmer, 2009). One such example of relational inversion comes from Participant AP2, who said,

*I want to know other peoples' opinion and I want affirmation that what I'm doing is correct.*

To start with, the participant had an open will to personal and relational inversion. On a personal level, the participant turned the beam of observation on the self (see Chapter 2.5.2). Through dialogue, the will opens up to form a space or that place on the deepest level of the U (see U-theory, Scharmer, 2009). In that space the self waits mindfully or what Scharmer calls presencing. This participant learned the purpose of his or her self. The next is to react on what emerges in this now space and once Participant AP2 knew what the future called for, the participant would do what is collectively expected from him/her. Such flow of collective creativity and entrepreneurship moves the self to its highest future or purpose (Scharmer & Kaufer, 2013).

Participant P1 demonstrated an understanding of the motion towards eco-awareness, saying,

*teaching minds, reaching hearts, transforming our world, so we are a school so the teaching minds of course is very important, but second on the list is reaching hearts, so we, we hold that as very, very important and the last statement is transforming our world.*

The school creates opportunities for the self to develop on an ongoing basis. Seeing as a whole is the result when the self meditates and listens deeply and then holds a space. Scharmer (2009) calls it a holding space – it is holding the space for the community as a whole to transform or to create something new (Capra, 2010). Scharmer (2009) calls this space presencing – waiting until the right moment arrives to act out on an instant into the future. Through classroom practice and other school activities, the individual or group in this school observe and again observe and reflect on what they believe and others believe through project based work and dialogue, and then listen deeply through mindfulness like activities.

Every system citizen must be able to “let go to “let come of the new”. The researcher studied a document by Alberta Education on one of their initiatives called *Moving forward with high school redesign*. All schools in Alberta, including the three schools the researcher visited, are incorporated under the redesign of high school initiative. In this document, *Flexible minded: Teachers’ journey*, teachers were asked what concerns them about “letting go”? The pointers in the document and video clip included in the online document challenge teachers to take risks and have flexible (or open) mind-sets. Someone on the clip said,

*when we moved from the Carnegie unit to the flexibility it was like walking off the edge of a cliff because you were asking teachers at a 30-level to have so much less face time in front of the student and we had to trust in the process (Alberta Education).*

Embracing the new means that everyone had to walk to the edge, turn the beam of self-reflection on themselves, and let go of the old. The process the person in the video clip refers to is what Scharmer (2009:kindle loc2253), referring to the unsustainable ways of the past, describes as,

when moving from seeing to sensing, perception begins to happen from the whole field. Peter Senge believes that this turn is at the heart of systems thinking. It’s about closing the feedback loop between people’s experience of reality (“what the system is doing to us”) and their sense of participation in the whole cycle of experience. When that happens, he said, people say something like “... look what we’re doing to ourselves”.

Change is an ongoing movement. System thinkers believe the world is never static and change occurs in every moment (Rowland & Higgs, 2009). Eco-awareness is in opposition to fundamentalism, which believes humans rule over the earth or, what Dweck (2008) calls, closed mind-set or else ego awareness. The researcher is not sure whether any of the participants is mindful of them leading and learning towards eco-awareness or not and what eco-awareness means. However, from the feedback during the interviews, participants described motion leadership through their experiences. Their perceptions of leadership shifted from old-school leadership to deliver results towards transforming the mind, heart and will. The researcher assumed it had a lot to do with the culture that became eco-aware and from ongoing training by Alberta Education, the media and other bastions in society. None of the participants used the term *eco-awareness*. All of them used various forms of vocabulary on self or individual and group or peer. Participants saw the connection between self and Self, although the researcher doubted whether some of the participants knew the

depth behind the self and Self as it refers to the communitarian I or spiritual Self, as discussed in Chapter 2.4.1 and 2.5.3 regarding deep ecology.

At the beginning of this section (4.4.2), the above quote by Barnard (2013:159) describes the U-theory as briefly discussed in Chapter 1 and 2 in this study, namely how to move from ego- to eco-awareness (Figure 2.10). The quote is a journey through the U from ego- to eco-awareness, to live with space and silence, which depends on good listening skills and meditation (Chapter 1.11.4), together with reflectiveness, observation and stillness. Schools need to grow their self-awareness in order to move from me to we awareness, seeing the organisation as part of a bigger system (Barnard, 2013). The journey starts with having an open mind. A couple of participants referred to an open mind on various occasions throughout the interviews. Participant T2 believes that the best way is to

*Keep an open mind to what the other parents are saying.*

An open mind progresses to an open will. The process starts with good listening skills, which result in observation and reflection. A shared understanding and alignment takes place once the participant experience being in the moment or the 'I in now' (see Figure 2.4). Consequently, the state is experienced as one of presencing to get know how to act on an instant, moment to moment. Participant AP3 said,

*I find value in other people and what they care about.*

Another participant saw the self not as a stand-alone but in need of interconnectedness with others around the self. From what the researcher observed, all the participants had an inclusive mind-set overall.

Participants did not refer to learning for sustainable development at schools that is embedded in all school subjects. The researcher did not get the sense that participants saw the relation between motion leadership and sustainable development. Nevertheless, participants did practise motion leadership at their schools as well as taught sustainable development goals in their classes and at the school. Therefore, participants were in the process of changing the status quo in society. Changing the status quo (Fullan, 2017) means that system citizens unload their unsustainable ideas and habits of the past to embrace new sustainable development principles as stipulated in Agenda 2030 as seen in Chapter 2.1. Scharmer (2009:Kindle loc 2149) says that

The primary job of leadership, I have come to believe through my work ... is to enhance the individual and systemic capacity to see, to deeply attend to the reality that people face and enact. Thus, the leader's real work is to help people discover the power of seeing and sensing together,

sensing their responsibility to the planet together as discussed in Agenda 2030 & Agenda 21. The researcher noticed on the Alberta education website an invitation was sent out to school authorities to participate in the on-line training for teachers on *The World's largest lesson 2017*, an initiative that introduces sustainable development goals to young people and to unite them. Alberta Education K-12 already implements the 17 sustainable goals at their schools through motion leadership. The researcher came to the conclusion that although participants did not see the direct relation between motion leadership and sustainable development, the *Guiding framework for the design and development of Kindergarten to Grade 12 Provincial Curriculum* (Alberta Government, 2016) touches on many aspects concerning these two topics.

Participant P2 mentioned,

*behaviour, to control yourself, work with people you might not get along with, work with certain demands, and you have to understand, what is my job, what am I to do in this span of time, and how do I want to get it accomplished.*

*introduce new ideas in a safe spot where there can be open dialogue.*

P2 emphasised the importance of asking "Who am I?", "What is my purpose?" (Chapter 2.4.3; Scharmer & Kaufer, 2013). Reaching the deepest level in the U, one sees that a balance between the small and big Self is the place where the individual goes through the skinny part to move from ego- to eco-awareness. Through dialogue, a holding space in the deep level of the U, where presencing takes place – Who am I, what am I to do? That is where entrepreneurship evolves. Interestingly enough, that is what Participant T1 understood, saying

*introduce new ideas in a safe spot where there can be open dialogue.*

The researcher is not sure if this participant knew the depth of understanding to the U-theory, but even if he did not, the fact that the participant acknowledged the safe spot where the move to the new happens was quite a revelation to the researcher. A new mental-

spiritual subject is created through holistic integration, describes the Self or I where all species on the planet are interconnected (Chapter 4.1.1). For the purpose of this study, the researcher studied a document, *Education 2030* (UNESCO, 2017). Education for sustainable development states in this document that a shift in our lifestyle and deep change in the way we think require new skills, values and attitudes. All of that is a holistic effort for all on the planet to work as the communitarian “I” or highest Self. Sustainable development in schools is given central place as Point 61 in Education 2030 stipulates.

Diversity plays a key role in motion leadership. The 12 standards by Alberta Education in the K-12 curriculum underscore diverse perspectives in order “to facilitate holistic student development (Alberta Government, 2016:14). Seeing as a whole results when the self meditates, listens deeply and then holds a space. Scharmer (2009) calls it a holding space – it holds the space for the community as a whole to create something new (Carpa & Luisi, 2014). Scharmer (2009) calls this space presencing – waiting until the right moment arrives to act out on an instant into the future. The individual or group observe, and again observe and reflect on what they believe and others believe, and then listen deeply through mindfulness like activities. This holding space is open until innovation strikes.

To bring about movement effectively, the school, community and business leaders recognise the space and wait purposefully until the right moment comes to innovate and create. As Fullan states (2010), they position themselves to go over into action, a ready-fire-aim approach. Like cells in nature, the self can take these risks and influence the others around it positively. The small self and big Self rapidly learn to readjust the whole system according to the most recent innovation and creativity that occurred. Fullan (2010:kindle loc.284) says,

to get anywhere, you have to do something, in doing something, you need to focus on developing skills, acquisition of skills increases clarity, clarity results in ownership, doing this together with others generates shared ownership, persist, no matter what, resilience is your best friend.

What Fullan says is that each system citizen quickly adapts to the new creativity and innovation, once they let go of the old ideas and allows the new to come. System citizens can do this because they possess the deep-learning skills or six deep competencies to do

so. Fullan (2010:kindle loc.295) says that motion leadership quickly brings positive change in a simple and “skinny” way.

Participant AP1 experienced that

*many of them still are very traditional in their teaching methods so in the traditional methods a lot of it is just kind of delivering information. So that doesn't necessarily lead to mindful communication, because the kids are just kind of taking in information without really having many opportunities to process it or apply it.*

Unilateral or one-way downloading of ideas does not give the learners a chance to observe and reflect on the information in order to come to new conclusions and does not lead to that space where letting go and letting come of innovative ideas take place.

All the above-mentioned participants (T1, T2, AP2, AP3) realise the importance of what has been sketched in Figure 2.10 – demonstrating that through communication by observing and reflecting, an open mind leads to deeper change. An open mind leads to an open heart and will, as discussed in Scharmer's U-theory in Chapter 2 (2009: kindle, loc.336). These participants value the importance of the blind spot. The participants demonstrate emotional intelligence because of their deep-learning skills. Through exposing themselves and others to other people's views, values and habits, they are able to turn the beam of observation for self-reflection on their inner being. Strategy 3 for motion leadership as discussed in Chapter 2.5.3 highlights the importance of bending the beam of observation on the self. At this point, the boundaries between subject and object, between mind and matter collapse and then move into the same space where the self becomes Self, the communitarian.

The turning point where the small self (ego) to big Self (eco) moves ahead (Figure 2.9) or what Fullan (2010) calls the skinny is when the “I” moves into the now (Figure 2.4; Scharmer & Kaufer, 2013). At this point, the individual self connects vertically with its own self and its higher Self. From this exact point, all movement spreads towards sustainable development (Chapter 2.4.3; Scharmer & Kaufer, 2013; Senge, 2006) when the self senses what is actually going on and senses one's highest future, one's calling and purpose. Sensing means acting from the presence of what is to emerge in the future. Senge (2006:256) finds that “leaders find space for leading change” in the middle of these “complex cross-currents (2006:256). Then, as suggested by Senge (2006), Scharmer and Kaufer (2013) and Fullan

(2010), leaders carry on their journey by leaving their deeply held behaviours behind to embrace the future possibilities.

#### *4.4.2.1 Sub-theme 1: Deep learning – The six Cs*

ESD aims at developing competencies that empower individuals to reflect on their own actions, taking into account their current and future social, cultural, economic and environmental impacts, from a local and a global perspective. Individuals should also be empowered to act in complex situations in a sustainable manner, which may require them to strike out in new directions; and to participate in socio-political processes, moving their societies towards sustainable development (UNESCO, 2017:7).

Motion leaders cultivate deep learning in themselves and others. Deep learning competencies lead to a change of attitude, belief and skills inside and outside each person. Such competencies open the self to be an instrument of service in the planetary system. Fullan (2017) identifies six deep-learning skills or competencies, namely character, citizenship, collaboration, communication, creativity and critical thinking. Aspects of character development that highlight self-regulation, self-confidence, self-evaluation and empathy are also a necessary part of learning to learn, manifested as self-awareness and self-directed learning. Fullan calls these “core competencies for continuous improvement” (Fullan & Quinn, 2016:5) meaning continuous movement forward. This is discussed in Chapter 1 of this study that refers to the skinny (Chapter 1.11.2) and the deep-learning skills or so-called competencies (Chapter 1.11.3).

Alberta education also refers to this same six C competencies to be mastered in every curriculum, namely critical thinking; problem solving; communication; collaboration; citizenship; and creativity (Alberta Education, 2016). Developing the six main competencies will take centre stage in each area of the school and its wider community. The researcher noticed that the document by Alberta Education *Guide to Education: ECS to Grade 12* (Alberta education, 2017:3) stipulates that competencies will have a greater emphasis than subject content. In the past, subject content took centre stage, but it is no longer sustainable for the future, as it is seen as static versus competencies that allow for problem solving on an ongoing basis. Global education, through deep learning, embeds the necessary skills in each person, regardless of the content they learn in class. Once they master the skills to realise who they are and what their task is in the planetary system, as well as know how to

be effective in the system through their skills as open systems, learning can be considered successful.

On several occasions, participants referred to one or more of the six deep-learning skills. While listening at all the participants during the interviews, the researcher realised the nature and vocabulary about learning at schools have changed over the years. All the participants have adapted to 21<sup>st</sup>-century contemporary rhetoric about learning. Teachers of old would typically refer to memorising, testing and competition, and the leader as a figure of main authority. Only one of the participants referred to competition at one point and called that out as something good as long as it was kept in check. One might think that older-generation teachers will be hesitant to use transformative language about the school experience. In this regard, the researcher did not notice any difference between seasoned and relatively young and new teachers at all. The capacity of the participants to take on the new form of education at every level is evident and the researcher believes the signs of reimagining how learning works are evident. It is no small issue that the participants were influenced through motion leadership to be effective system players at their schools and in turn had a positive influence on those around them.

System players are constantly subject to changes in the system and needs to form new patterns and links accordingly. Competencies will be developed over time through each subject course's learner outcomes. Competencies, according to Fullan (2017), leads to fulfilling a human being's ultimate goal on earth, namely the moral imperative of "what is my work for?" Developing habits to master and continuously evolve the six global competencies according to Fullan (2017) is a natural evolutionary instinct with the main purpose to help humanity. Deep learning allows people asking 'what are we here for?' (Fullan, 2017; Scharmer, 2009). The six deep-learning skills enable massive amounts of complex systems with numerous numbers of people as Fullan (2017:kindle loc .115) says, "Helping humanity change the world." Motivation to serve gives connectedness to the whole of the planet. Deep learning is always an intrinsic and then extrinsic matter, a move from ego to eco awareness or motion from me to we awareness. After studying the previously mentioned online document called *A guide to education: ECS to Grade 12* (Alberta Education, 2017:3), the researcher understood that the engaged thinker in Alberta schools and the community learn how to think critically and creatively, as well as to communicate and collaborate



through learning by doing through the inquiry-based curriculum and that these competencies

integrates ideas from a variety of sources into a coherent whole and communicates these ideas to others; adapts to the many changes in society and the economy with an attitude of optimism and hope for the future; as a lifelong learning (citizenship).

In short, deep learning makes motion leadership possible for sustainable development and happens the way. Fullan (2010:kindle loc.284) puts it,

to get anywhere, you have to do something, in doing something, you need to focus on developing skills, acquisition of skills increases clarity, clarity results in ownership, doing this together with others generates shared ownership, persist no matter what, resilience is your best friend.

Preparing towards the future for a sustainable world, Participant P3 said,

*Our school initiated a project which was a project that envisioned the world in 2050 ... what innovative solutions can we develop and the idea was not to bombard the students with a lot of bad news but to harness their creativity and innovation so we had schools from five regions in the country who worked on individual projects in their schools and occasionally collaborated through an online platform and then we brought all the schools together for sort of a summit type of event.*

Not only did schools work as individuals, but they also co-sensed together to envision the future. In addition, during this time, students, as P3 said, also practised their creativity, critical thinking skills, collaboration and citizenship skills.

To move from ego- to eco-awareness requires similar qualities and competencies from each one in a system. Deep learning involves, as Goleman (2013) said, deep focus on yourself, deep focus on others and deep focus on the wider world. Scharmer (2009; Scharmer & Kaufer, 2013) expresses the same idea when he promotes a focus on self and self, self and others and self and self and nature (see Chapter 2.3). Kirtman and Fullan (2016:11) describe this triad of awareness as

every leader needs to cultivate this triad of awareness, in abundance and in the proper balance, because a failure to focus inward leaves you rudderless, a failure to focus on others renders you clueless, and a failure to focus outward may leave you blindsided.

Scharmer (2009:kindle, loc.2792) suggests that by cultivating this triad of awareness, it allows one to look at old issues in new ways and bring one's real self into the situation. He declares,

Moving into the realm of presencing happens to groups when you go through the eye of the needle. First, they feel a strong connectedness among the group members. Then you sense among yourselves the power of authentic presence. Once a group has experience that level of connection, there is a deep and subtle bond that remains.

The deep-learning skills allow for capacity leadership wherein each person acts as a node in the system to function within themselves and in the system as vehicles to transmit the sustainable development principles. Education for sustainable development (ESD) has at the core of the 2030 Agenda the 17 sustainable development goals. These universal, transformational and interconnected goals (UNESCO, 2017) should circulate through nodes on the millions of complex systems within the one planetary system. Nodes' main function is to provide feedback loops in the system that offers constant and complex problem solving to the system. Curriculum expectations through highly engaging and sustainability-focused learning activities develop these feedback loops among students and teachers in the school. Participant P3 said,

*We know from the whole constructivist approach the students construct knowledge in social settings not individually by being told something I think we know the collaboration is important but there is a large sort of thrust now that's personalized learning.*

Fullan and Edwards (2017) say that deep-learning competencies develop when students, teachers and the community work in partnership. Cultural transformation becomes a reality when everyone is engaged in their own personalised learning to master the six deep learning skills but then as Fullan (2017) says, everyone becomes a teacher for everyone else; that is, inside themselves and outside of themselves. Fullan (2017) also says that deep learning strengthens the relationships, which make the culture become stronger because of the shared understanding between people. Deep learning comes back to the above quote at the introduction of this section's sub-theme.

Participant P1 said,

*students are required to do either service at the school, volunteer service of course or in their communities.*

According to Fullan (2017), helping humanity is an evolutionary instinct and doing something that is worthwhile for oneself and for the whole of the planet. The purpose of life to Fullan (2017) is when leaders help to unleash and enable new creative ways of thinking and acting to help humanity. Service to Fullan is to change the world, a natural force in our evolutionary makeup. Helping humanity is to implement and maintain the sustainable development principles as set out in Agenda 2030.

Participant P 2 mentioned,

*how to think, not what to think, so it's helping them learn and develop their own toolbox in how they learn.*

Fullan (2017) describes motion leaders as those having a special talent for uncovering and helping the group to create new ideas that can solve problems in innovative ways. Developing structure and culture at school and in the community through deep learning embeds sustainable development in widespread community networks that create a learning community for everyone to “walk the talk” or as Fullan (2010) also says, learning by doing.

Participant AP1 said,

*you are teaching each other and learning and growing.*

Fullan and Edwards (2017) state that successful change involves developing deep-learning skills that involves everyone, meaning learners, parents, janitors, clerical staff, teachers, the community at all levels and views this scenario as a win-win proposition. Fullan (2017) describes what Participant AP1 said, namely teaching, learning and growing as a shared understanding of what the goals are and that they help everyone to get better as they develop the skills to be competent in the system. Such learning by doing purposefully supports deep learning competencies.

Participant AP2 thought,

*I think the curriculum needs to have more open-ended questions and big ideas, rather than specific guiding.*

Hargreaves, Boyle and Harris (2014) suggest that deep-learning skills occurs when one feels that one creates emotional and social value, standing for something important. This

participant suggested that the curriculum restrained students from creative and innovative problem solving.

Participant AP 3 mentioned,

*they will work together as a group as long as it works for them.*

From this participant's experience, the students would work collaboratively and practise that skill up to a point. Should they not develop their communication and collaboration skills, they might act as closed nodes in the system. It seemed that the participant was not satisfied that the group preferred themselves to the team.

Participant T1 said,

developing goals for student engagement in order to enhance student learning.

Participant T2 thought as follows,

*learning how to be self-directed, where you can look for information create opportunities for self-awareness and innovation.*

Both Participants T1 and T2 suggested that students needed to be involved in pedagogies that were beneficial to them. Motion leaders create opportunities for their followers to learn how to develop deep learning skills. Participant T1 experienced a sense of satisfaction by creating circumstances for deep-learning skills to be practised. Fullan and Edwards (2017) explain that learning by doing is something that the leaders create for others by developing specific instructional methods, leading students in project-based learning experiences. In all of that, they (Fullan & Edwards, 2017) say people become skilful themselves as well as learn deeply from the others around them and that is what ongoing learning do, it builds into the culture. T2 said that self-directed learning lead to innovation, this underwrites what Fullan and Edwards say, namely that leaders need to create a culture of innovation by designing the learning experience.

#### *4.4.2.2 Sub-theme 2: Mindfulness and emotional intelligence*

With a deeper understanding of systems, grounded in mindfulness and caring, today's students will go through their lives better prepared to make decisions that are good for them, beneficial to others, and helpful to the planet" (Goleman & Senge, 2014)

Awareness or mindfulness is a path to awakening that creates an onward-leading motion in each human according to Goldstein (2013). Goldstein (2013:kindle loc.208) says when humans are not aware or mindful they often get lost in destructive behaviour and patterns and create suffering for the self and others. Living in the now, being present in the now, acting from the now and reshape from the now sprouts from awareness. Awareness or mindfulness is defined by (Farias & Wikholm, 2015:4) as

not only becoming more in touch with a greater power, but also becoming more aware of inner feelings and thoughts, as well as more connected and sensitive to other people's needs.

Under sub-theme 1, deep learning, one saw what role the competencies play in moving humanity from a me-to-we awareness system. In this complex system, planet earth (or the we-awareness system), everyone under the Inspiring Learning initiative (Education for Sustainable Development ESD – see CMEC, 2014) will learn to adhere to the sustainable development principles to keep the planetary system alive (Capra & Luisi, 2014). Spiritual-emotional intelligence strategies such as mindfulness, meditation and other silence and listening techniques play an important role in this flux between focusing on ourselves and tuning in to others and the larger world (Goleman & Senge, 2014).

The researcher noticed that two of the schools use Dweck's book *Mindset* about growth mind-set to assist teachers to adopt new ways of being. Growth mind-set meditation is a guided meditation that cultivates a positive mind-set with the potential to cause brain growth. Farias and Wikholm (2015) state that meditation was primarily designed "not to make us happier but to destroy our sense of individual self – who we feel and think we are most the time". Dweck (2006) also describes ways in how to destroy the individual self in order for the individual to take on the open mind-set. Dweck further refers to the individual who, after the destruction of the self, can work with and change their beliefs, having a changing mind-set. Kabat-Zinn (2012:kindle loc 817) says that who one is, is bigger than the story one tells about oneself, since one will always deconstruct the self through reflection and observation, feeling fragmented and pulled between competing stories and this is according to him a very good sign. The reason is, he says, is that it destroys the sense of self gives that inner longing to belong to an integrated life, experiencing non-fragmentation. This is awareness, namely being mindful that wholeness lies in every

moment and belongs to every self, as Scharmer (2009) states, the self connects with the big Self.

Mindfulness allows the individual to disengage the self from anything in the world, especially the view of self (Goldstein, 2013:29). The participants also said they focused on being in the present moment. This means that being present in the moment allows someone to act out in an instant (Scharmer & Kaufer, 2013) to let go of the old and let come of the new – from ego- to eco-awareness (Chapter 2.2). Such letting go of old identities and allowing them to see together with others when they open themselves to allow in new worldviews. Alberta education provides restorative practices in schools to advance the ongoing growth in self-awareness and relationship skills.

Being whole and part of larger and larger circles of wholeness, one belongs to humanity, to life to this moment (Kabat-Zinn, 2012:kindle loc.734.). According to Kabat-Zinn, meditation is not about being stuck in the gap and doing nothing. One waits to see what emerges in the moment, the how of coming to one's senses moment by moment. Scharmer & Kaufer (2013:kindle loc 3345) refer to the place where one lets go of the old and allows the new to come; the place where the small self connects with the highest self (Figure 2.4). Kabat-Zinn explains that the individual asks, "Who am I?" (see Chapter 2.5.3). This is where, according to Kabat-Zinn (2012:kindle loc.784; Fullan, 2010; Scharmer, 2009; Senge, 2006), a person realises that everything he/she knew and believed up to that moment is "a fabrication that we have gotten comfortable with", meaning laying off the old habits and going through a rebirth process (Scharmer, 2009). Mindfulness leads to an open way to ask, "Who am I; where am I going?" (Kabat-Zinn, 2012:kindle loc.777). According to Kabat-Zinn, the value of mindfulness is found when one pays attention in a holistic way, allowing moment-by-moment life experiences to unfold and becoming drowned in unfolding patterns of creative miracles, because one moves to a new way of seeing, doing and being.

Participant P 1 recognised the benefits of meditation but was wary of what people were supposed to meditate on,

*I think meditation can be beneficial, I would have personally and professionally concern about what it was they were asked to meditate on.*

This participant may or may not be aware that meditation leads to problem solving and creating new ideas. It is not clear whether the participant understood the connection

between meditation and the education for sustainable development curriculum (ESD). Meditation allows for a shift of mind, from seeing ourselves as separate from the world (Figure 2.2) to be connected to the world – from seeing problems as something “out there” and not seeing how one’s actions create the problems one has (Senge, 2006:11) to seeing everyone has a responsibility to the earth. Such responsibility is described in Agenda 2013, Agenda 21 and CMEC (2014) and therefore education for sustainable development (ESD) takes centre stage inside and outside schools.

Participant P3 said,

*we believe it works, we're still in our infancy developing programmes but we are seeing a growth in interest that is to say when we offer a session on mindfulness or yoga – we focus on awareness and fully present in the moment*

The researcher saw on the internet that there are some new programmes on wellness sporadically added by Alberta education and Alberta health departments. There are various documents on emotional intelligence programmes by Alberta education available online under “safe and caring schools”. From the interviews and from studying various documents the researcher learned that schools often send their staff to seminars where mindfulness as well as self-regulation and brain development are discussed. Visual learning and brain development in particular are very popular seminars to attend. P3 said their school also developed their own yoga, meditation or brain development courses and invited speakers to their school.

Participant P2 said,

*you have to understand, what is my job, what am I to do in this span of time, and how do I want to get it accomplished.*

Asking this key question, stillness, emotional intelligence, mindfulness are the key factor in strengthening a student’s moral compass (Goldstein, 2013:201). Dweck (2009) calls for open mind that allows one to change one’s mind, where she refers to the mind of champion whose heart and will are open to change. This corresponds with what Scharmer (2009) says that when opening all the heart, mind and will, a person lets go of previous behaviours and belief and allows new paths of consciousness to enter the person to move ahead to eco-awareness. Becoming the highest self (Figures 2.1; 2.10; 2.12) is to fulfil one’s highest

potential. That is when the individual opens up and integrates with a deeper source or the higher Self. Doing this, the gap between the social, environmental and spiritual divides become closer, leading to a holistic system, the earth as one living system (Capra & Luisi, 2014).

Participant AP1 described mindfulness as,

*centring your mind and finding a peaceful thing whether you call it meditation or prayer or centring or focusing and I do believe that does help your brain.*

This participant's definition is accurate and corresponds with the consensus that mindfulness demands that one pays attention to the here and now when one solves problems and becomes creative (two deep-learning skills). When the mind is in a quieter place; that is, when the mind focuses on something that is of paramount importance, like a huge problem that needs to be solved. At this point, the mind goes deep into the subconscious (Senge, 2006:153) to connect with something bigger than the ego self. Scharmer (2009) says this is when the mind becomes still and waits to act in an instant in the future and both above-mentioned cases allow the mind to become still. The reason for meditation and mindfulness is to wait in silence and listen to see what wants to emerge (Scharmer, 2009), as well as what part the "me" plays to create the new (Senge, 2006). The I-in-now moment (Figure 2.4; Scharmer & Kaufer, 2013) connects the self and highest Self with each other and with others. Maturana (Capra & Luisi, 2014), as discussed in Chapter 2.4.3, believes that when the mind is still, it creates growth and creativity; these two opposite actions always create constant movement in an individual, the environment and in the group. Chapter 2.5 discusses the matter of experience; that experience such as meditation consists of suspension, redirection from what once first knew and letting go of it. Dweck (2006) states that those with a fixed mind-set believe they have an unchangeable moral character versus those whose brains develop have a growth mind-set that allows them to take on new moral behaviours and habits such as those of the sustainable development principles.

Participant AP2 thought,

*if they feel that they're having a hard time focussing they can choose to go for walks.*



In this class, students have been taught to understand themselves and in this case to recognise their need to have a quiet time. This teacher creates a space for stressed-out students or those who cannot concentrate to get their head straight somewhere outside of the classroom. Self-regulation in individuals allow the person to develop and maintain the inside codes of behaviour (see Chapter 2.4.3) according to Maturana. At the same time, the environment around the self-managed cell does the same and movement between these two systems occurs as long as the individual remains an open system (Capra & Luisi, 2014; Maturana, 2007), or what Dweck (2006) calls, a growth mind-set. AP2 believes focusing does help the brain. Goleman and Senge (2014) refer to the growing brain as neuroplasticity where the brain operates in circular movements between systems and environment.

Participant P3 describes that as

*we focus on awareness and fully present in the moment.*

Using relaxing activities ensure creativity and problem solving (two deep-learning skills). Fullan (2013:26) quotes Lehrer's "thinking outside the box", and anticipates best thinking is outside one box but still inside one's head in another box ... work on a problem directly but build in times to get away for reflection or immersion in something else. Lehrer goes on to say, "Are you stuck on a challenge that seems impossible? Lie down on a couch by a sunny window." By this, Fullan reiterates that because one is in a relaxed state of mind (Fullan, 2013:26),

we are more likely to direct the (self-awareness) spotlight of attention inward toward that stream of remote associations emanating from the right hemisphere. When attention is directed outward to the details of the problem, we miss connections that lead to insights.

At the bottom of the U there is silence and listening (Senge, 2006:402). Leaders create opportunities for others to move down to the bottom of the U (Figure 2.10) and are by now grounded in the reality of the situation, recognising there are different worldviews and behaviours. At this point, the individual waits for something larger than the self to emerge, that creative moment when a rebirth takes place (see Chapter 2.5.3) solving complex problems (Scharmer, 2009).

Participant T1 is of the opinion that stillness offers an alternative to the noise

*offering students an alternative to constant stimulation. And I think that is really, really important for like you know to train them in stilling their minds and disconnecting from the constant stimulation and like learning how to be still.*

Participant T1 also maintains that training students to be disconnecting and learning to be waiting in stillness is very important. Goldstein (2013:365) describes the disconnectedness T1 refers to as follows,

Contemplating the body, diligent, clearly knowing, and mindful, free from desires and discontent in regard to the world. In regard to feelings he abides contemplating feelings, diligent, clearly knowing, and mindful, free from desires and discontent in regard to the world.

Learners at schools individually need to follow the “concentration part of the Path” (Goldstein, 2013:353) a journey that releases energy to move to a wholesome mind where there are no defilements present. At this point, one knows who one is and what one’s purpose is, or what Goldstein (2013:363) believes, “We get glimpses of something beyond our ordinary, conventional reality, touching a space that transforms our vision of who we are and what the world is.” This is the “eye of the needle” (Scharmer, 2009) as referred to in Figure 2.9 and Paragraph 2.5.2.1 that explains “the skinny” (Fullan, 2010). Leaders and followers follow this path of movement from ego- to eco-awareness and when they reach the deep level in the U in what is described by the U-theory (Scharmer & Kaufer, 2013) as the narrow gate, then individuals sense the future from their present moment (Scharmer & Kaufer, 2013). Such co-sensing brings liberation, as one Buddhist monk said, “liberation is the inevitable fruit of the path and is bound to blossom forth when there is steady and persistent practice” (Goldstein, 2013:364).

Participant T2 said about mindfulness,

*it reconnects you and I think it lets you think more, for me it allows me to look from both sides, versus just my side.*

T2 realises that one should be integrated with oneself, reconnecting the self and to see the future emerging (eco-awareness)(Scharmer, 2009). This shifting structure through meditative practice can be extremely helpful when one works more productively with the subconscious mind (Senge, 2006). This is when personal inversion (see Chapter 2.3) takes place, bending the beam of observation into the outside world, then bending back onto the

self and then finding the sources of self, of becoming present in the moment, in the now (Scharmer,2009).

#### **4.4.3 Theme 3: Move towards eco-awareness: institutional inversion**

Teachers and learners are pursuing and fanning the flames of purpose, passion and ecological sustainability” (Fullan, 2013:28)

Whole-system reform takes shape when leadership that operates from the top moves down to an inverted state. This results in major world systems to become interconnected and therefore bring about the UN’s vision for sustainable development set on 2030 to completion. Such happens by shifting leadership to the boundaries (see Figure 2.11; Scharmer & Kaufer, 2013). Schools move leadership at the top closer to the middle; then transport that to the boundaries of an organisation and eventually to the surrounding environment around the organisation. The three schools in this study that were observed fluctuate between Stage 1.0 (hierarchy) and Stage 4.0 (eco-system awareness; see Figure 2.11).

Motion leaders create conditions rather than giving directions, like Capra (2010) says, the focus is vaguely the same, but the emphasis is on leadership that facilitates openness for movement of information, ideas and values between organisations – making sure each one has an open mind, heart and will as discussed in the U-theory in Chapter 2 (Scharmer, 2009). Stage 1 schools are authority- and input-centred or teacher-driven; Stage 2 schools are outcome-centred or testing-driven; Stage 3 schools are student-centred or learning driven and Stage 4 schools are entrepreneurially centred, which means they co-sense and co-create as a whole (Scharmer & Kaufer, 2013). An upside-down realm encompasses each and everything through its Oneness or big Self or communitarian “I”. Institutional inversion allows for co-creative relationships among stakeholders, flipping the old pyramid model upside down to create a new eco-system model of organising. At the heart of the inversion (*Umstulpung* – see Chapter 2.5.3) of the old system, a pyramid flipped upside down, inside out, is the cultivation of co-creative relationships among stakeholders (Scharmer & Kaufer, 2013). Such a new eco-system of organisation according to Scharmer & Kaufer (2013) where the geometry of leadership and power is inverted creates dynamic movement and flow within and outside systems. Capra and Luisi (2014:355) state,

“sustainability is a property of an entire web of relationships, it always involves a whole community”.

A participant at School 1, T1, was not sure that leadership from the school board and administrators were fully open to change their boundaries. Participant (T1) said,

*they are open to understanding but not necessarily like modifying their views in light of new information. Potentially, like in some cases.*

Institutional inversion leads to an evolutionary reimagination of truth between massive systems. Stakeholders embedded in patterns of layers of systems within systems may circulate correctness one moment, which might turn to incorrectness the next. Leading for the common good involves a sacrifice of the personal self. Sustainable development utters a universal tone towards humanity and distributes its cosmic principles among all through all, as long as each individual in the system keeps its inner structure. (See Chapter 2.4.3 on Maturana and Varela.) Once a problem arises, institutions reorganise itself around a spurt of new energy to accommodate cosmic solutions. Blending the whole planet into one system has to be an institutional effort (Scharmer & Kaufer, 2013). Capra (2010) says that living systems normally remain in a stable condition, although the patterns and structures constantly change. (Also see Chapter 2.4.2.) When obstructions or breakdowns in a system occur (Capra, 2010), then creativity and entrepreneurship take place. At such critical points of instability, old behaviours and ideas stop circulating, from where a new, collective consciousness breaks through the cracks of the old mind frame (Neal, 2006). Inverted institutions are able to absorb the new solutions rapidly and form new patterns and forms accordingly that have a positive influence and effect on the whole of the system.

Leadership comes from the middle (Fullan, 2017) among organisations, since complex feedback loops can have a breakdown anywhere in the system. Capra (2010) sketches a practical example of problem solving in the system, namely when one stakeholder gives an off-hand comment in a human organisation that is not of value to them, but is valuable to the others around that organisation. They will then send the information very quickly through all the stakeholders' networks. This can happen because institutions are turned upside down and inside out, and therefore act as open systems. Sending information may be skewed and the organisation can no longer absorb the present ideas and beliefs within the larger system. At this point, instability is reached. That is when the system experiences

chaos and confusion and kicks out the old to organise itself around new meaning through dialogue among stakeholders as the situation evolves. According to Capra (2010), such new order is not created by an individual stakeholder, but by the organisation's collective creativity, which results in brand-new entrepreneurship (2014:308).

As communications recur in multiple feedback loops, they produce a shared system of beliefs, explanations and values – a common context of meaning – that is continually sustained by further communications. Through this shared context of meaning individuals acquire identities as members of the social network, and in this way, the network generates its own boundary. It is not a physical boundary but a boundary of expectations, of confidentiality and loyalty, which is continually maintained and renegotiated by the network itself.

Neal (2006:kindle loc.1168) says, “It seems to me that our collective consciousness is up against that moment in which new expression and healthy change demand our attention.”

Triple focus in systems, according to Goleman and Senge (2014), refers to an interdependence between the inner (self-self), other (self-other) and outer self (self-nature/spiritual). Such triple focus leads to entrepreneurship between systems where they can co-sense. Take, for example, at School 1. All three staff members at this school concentrate on creating a holding space for the individual to become open to create the new, promote peer learning in class and service to the community.

Participant P1 mentioned,

*all grades have a service component and the students are required to do either service at the school, volunteer service of course or In their communities, so a lot of them serve.*

Participant AP1 said,

*how to interact and work as a team.*

Participant T1 thought,

*setting up a space that's a little bit conducive for students to disconnect and be still.*

When obstruction in the school takes place, leaders serve as containers who unblock the energy and help people readjust (Rowland & Higgs, 2008) and do so at multiple levels. One of the participants from (T2) realised that keeping a holding space was important.

*keep an open mind about everything and versus just giving a point of view,*

and went on to say,

*come back with some solutions that we both can work on.*

This participant bent the beam in his or her holding space to listen with an open heart and allowed this participant to feel the true presence of what the other was experiencing. Participant T2's explanation is an example of what stakeholders and the school can do once problems arise; they also would want to keep the holding space open to create new energy "by authorising others to lead the leadership team now had far more command than when they had tried to control" (Rowland & Higgs, 2008:211).

Participant AP2 explained the following,

*students bring in their knowledge from home and they're able to use that in their opinions about what they're learning*

He also said,

*respecting that everybody has their own opinion.*

Transformation in education revolves around transforming the relationship between school and stakeholders. These two stakeholders respect each other when problems arise. Rowland and Higgs (2008:212) define, "'to contain' is 'to hold for the purpose of movement'". This particular school's leadership created and implemented structures that can hold and move along the school as organisation. Such leadership channels energy rather than constrains the flow of events, which brings new patterns and layers to the system. Respecting one another allows a shift when the heart and mind start to open.

Participant P2 said,

*and a parent calls us out and we just humbly accept it and we apologise and say how can we move forward, and ultimately just being transparent,*

One of the ways the school works with stakeholders is to move the leadership to the middle. Leadership at this school accesses their emerging self as organisation by cultivating practices to listen deeply and support one another, all knowing they need one another to solve problems among them.

All three participants (T2, AP2 and P2) showed the qualities for moving from ego- to eco-awareness in what Rowland & Higgs (2008:216) says,

Container leadership is not about taking the anxiety oneself, or trying to smooth things over or rescue people, it is about making the anxiety visible and becoming as open as you can be about what is happening.

Level 3 offers a holding space to help stakeholders to see themselves in the light of the other stakeholders and eventually the larger whole and therefore has a balcony view whereby they see themselves as part of a larger picture, part of the system.

Participant P3 was under the impression that,

*we do a lot of collaboration with other private schools.*

School 3 belongs to the Association of Independent Schools and Colleges in Alberta (AISCA). This school is willing to move the relational dimension to the centre stage. They are also incorporated with Alberta Education as well as the International Baccalaureus (IB) programme. The IB programme operates on a global scale and has many stakeholders attached. This school is a safe and caring school with wellness programmes such as mindfulness that play a role in the quality of holding space towards eco-awareness.

P3 said,

*mindfulness sessions, some mindfulness integrated into elementary classes*

and

*encourage our students and teachers to be happy, being happy is a worthwhile pursuit.*

School 3 shows strong traces towards developing their school system as a whole. For example, they are in the process of building a new section to the school that opens large spaces for the community, parents, businesses, students and staff to intermingle around

organised projects by the school. These flexible spaces enable the school to incorporate the wider community in the school into an integrated space. The school also tries to bring all the stakeholders in connection with one another. The school builds on a future where their students and teachers will have access to their creativity and entrepreneurship. The school also presents mindfulness programmes for teacher and students in the school building. Level-4 inversion is multilateral by nature and collectively innovates creative ecosystem conversations between diverse groups of people where they can dialogue and co-create and co-sense the future transformation together.

#### *4.4.3.1 Sub-theme one: influence of the organisation's perception on sustainable development principles*

Perception on sustainable development is based on common meaning (Senge, 2006). There are ways to channel an organisation's intelligence to that of collective intelligence where free-flow sustainable development principles stream throughout open networks (Senge, 2006). At first, the organisation should be open to the flow of such a holistic intelligence. Bohm (in Senge, 2006) points out that thought is collective and humans cannot improve on thought individually. Through dialogue, individuals find common meaning. Therefore, individual organisations cannot stand alone to pursue the goal towards a sustainable future, as stipulated in Agenda 2030 and Agenda 21. Through dialogue, each organisation sees itself for what it is and then realises what should be done to become part of the collective networks and systems surrounding them. A key feature of systems thinking, Senge (2006) says that, when the individual organisation sees itself as part of the whole system, the unsustainable ways of the industrial area has a destructive influence overall. Sensing the future to make it sustainable for future generations requires the observing instrument and the observed object to interact with one another. The reason for that is that perception and action are not separated. This is an important factor in order to facilitate bringing those who are different together. In the end, a heightened experience of being part of the whole shapes in each groups boundaries to connect them all.

Organisations that see hierarchy as antithetical rely on dialogue to play with new ideas (Senge, 2006). Bohm (in Senge, 2006:226) has identified three conditions necessary for dialogue, namely all participants need to shed the beam of observation on themselves; regard one another as partners and have a facilitator to guide dialogue. To move from ego



to eco awareness as a school, a system citizen need to suspend their own ideas, especially on hot topics.

The three schools demonstrated their ability to utilise all three of these aspects. School 2 in particular builds its reputation as a self-directed school. In the school, peers learn from one another, while the role of the teacher is that of facilitator. It is unclear to the researcher whether the students and teachers flip roles whereby teachers act as peers to the students and learn from them.

Participant P2 said,

*teachers act as a facilitator.*

Participant AP2 said,

*work with a peer, and work together on it,*

while Participant T2 said

*peer activity is important as long as they are aware of that each of them needs to do their own work.*

From School 1, the researcher heard the participants say they did group learning with a view to transformation on the part of students and teachers towards good stewardship. T1 said,

*Oh my goodness, like I think the values and the approach, and the vision that he had for the school, I was so on board with that.*

Transformation of teachers towards sustainable development in school one school might be problematic, based on what the researcher heard Participant AP1 said, namely that,

*from what I have observed, people do try to keep kind of their professional lives and their personal lives pretty separated.*

The participant also said that although they kept their distance from one another on a personal level, for the most part they bought into the mission of the school. The principal of School 1, P1, said in the school they had

*very positive and meaningful communication*

among the many different nationalities in the school.

Participants from School 1 viewed some of the three guidelines set out by Bohm (in Senge, 2006) as follows:

Participant P1, on dialogue between those with different ideas, said,

*they could have rigorous debate over the issue and discuss it openly but that the difference of opinions or values of the students would be respected by, by everyone in the classroom.*

P3 said,

*if you're interacting with someone and you understand that some of their ideas and solutions to challenges will be based on a worldview that's different then I think my job is to try and understand that and where are our worldviews different and is that an obstacle to collaboration.*

#### **4.4 DATA OBTAINED FROM DOCUMENT ANALYSIS**

The participants were not forthcoming with documents, since the researcher did not need them for the online documents on the schools' websites and social media. In addition, the Alberta education website gave enough information and a balcony view of the education situation in Alberta schools. This is data-rich and provides the researcher with a good background about the culture of each school. However, the researcher hoped to gain documents from principals that would show evidence of the expansion of stakeholder relationships between the school and others, but did not want to intrude their privacy concerning these matters. The level and nature of stakeholder involvement have a direct influence on answering the question whether motion leadership has an influence on sustainable development at schools.

However, the researcher did manage to gain much other data from the interviews and websites, which allowed her to gain insight into the role of motion leadership. The literature review in Chapter 2 gave the researcher a lot of insight into handling the data interpretation.

School 1, which includes Participants P1, AP1 and T1, has a Facebook page and website rich with information that indicates the relationship between stakeholders and the vision for

establishing sustainable development in the school. Participant T1 runs an educational blog, which also sheds some light on 21<sup>st</sup>-century education in Alberta. The three-year plan of the school and the results from previous years are also well documented on the website.

School 2, which includes Participants P2, AP2 and T2, has also a Facebook page and website. The three-year plan of the school and the results from previous years are also well documented on the website. Like School 1 and 3, there are plenty of documents on both the Alberta Education website as well as the AISCA website. Weekly newsletters, the vision and mission the each school are available on School 2's website.

School 3, which includes Participants P3 and AP2, has all of the above-mentioned data that the other two schools have. What is interesting is that since it is an IB school, one gets many documents on the International Baccalaureate website such as the programmes, professional development documents and many global initiatives. In addition to that, many links on the website steered the researcher in various directions concerning the relationship between School 3's vision and mission and that of global education. The school, as well as Alberta Education, AISCA and IB, has twitter feeds from where the researcher also found valuable insight for all three schools. The researcher found twitter valuable because it brings current information forth on a continuous basis.

#### **4.5 SUMMARY**

This chapter began with a brief introduction to the purpose of the study, outlining the questions presented in Chapter 1. At the beginning, the research process was explained, the procedure followed described and the steps to ensure trustworthiness defined. The interaction with the various participants were written down. Main themes were discussed from the data collected through the face-to-face interviews and documents obtained online. Data obtained from the document study were referred to during theme discussions and this interpretation of the study followed the analysis of the data. This section was broken up into three themes, which each had sub-themes. The findings of the study were compared to the literature review conducted in Chapter 2.

#### **4.6 CONCLUDING REMARKS**

In this chapter, the research results were analysed, interpreted and synthesised. The results were also discussed and synthesised to put forward motion leadership as vehicle for

sustainable development principles. “The aim of the 17 SDGs is to secure a sustainable, peaceful, prosperous and equitable life on earth for everyone now and in the future.” (UNESCO, 2017:6)

Mainly the works of Capra and Luisi (2014), Scharmer and Kaufer (2013), Senge (2006) and various works of Fullan (2010; 2017) were applied to practice. Three main themes were identified from the literature as well as the in-depth interviews and some online documents, which gave insight into motion leadership from a systemic point of view and what role it plays in the implementation of sustainable development at Alberta schools. The three main themes and their sub-themes were identified as:

Theme 1 – Motion leadership creates systemness

Sub-theme 1 – mental health

Sub-theme 2 – social capital

Sub-theme 3 – trust is the social glue

Theme 2 – Motion leadership gives forward motion from ego to eco awareness: personal – a relational inversion

Sub-theme 1 – deep learning

Sub-theme 2 – mindfulness

Theme 3 – Move towards eco-awareness: institutional inversion

Sub-theme 1 – influence of the organisation’s perception on sustainable development principles

The above themes were discussed using the motion leadership theory and the United Nations Agenda 2030 and Agenda 21 sustainable development initiative.

Chapter 5 summarises the study and draws the conclusion of the study. Recommendations are made and ideas for future studies are outlined.

## **CHAPTER 5: SUMMARY, FINDINGS AND RECOMMENDATIONS**

### **5.1 INTRODUCTION**

The purpose of this chapter is to present the summary, findings and recommendations of this study. The main objective of this study was to establish what the role of motion leadership in the implementation of sustainable development principles have in Alberta secondary schools. The sub-aims of the study were to:

- to describe and define a systemic worldview and motion leadership (addressed in Chapter 2 as part of the literature study);
- to explain how motion leadership can support change and improve sustainable development principles in secondary schools (addressed in Chapter 2 as part of the literature study);
- to determine the role of motion leaders in the implementation of sustainable development principles in secondary schools (established by the empirical part of the study); and
- To discuss the strategies that might serve as guidelines to implement sustainable development principles at secondary schools through motion leadership (discussed as the main outcome of this study).

The four sub-aims are be discussed in the research conclusions section of Chapter 5.

### **5.2 SUMMARY OF THE STUDY**

Johansen (2017) says that leaders need to know with great clarity which direction they take, but with the greatest flexibility to get there. Motion leaders are able to deal with problems or dilemmas. Inquiry-based learning in Alberta schools helps to foster such skills. Motion leaders can implement sustainable development because they themselves are open systems (open mind, open heart, open will – see Chapter 2.5.3) and influence others around them to the same. They sense the future, internalise that and act upon that In-the-moment. The rationale of the study was to find out what role motion leadership (see Chapter 1.11.1) plays in the implementation of sustainable development (see Chapter 1.11.2) at secondary schools in Alberta, Canada. Sustainable development is a process to bring the environment,

social and spiritual divides together towards eco awareness. Sustainable development (see Chapter 1.11.2), according to the Brundtland Report, refers to development that meets the needs of the present, and at the same time does not compromise the ability of future generations to meet their own needs. The case study helped the researcher to explore the role of motion leadership to have personal, relational and institutional inversion (see Chapter 2.5.1-3) at Alberta secondary schools and the province under Alberta education.

From what the researcher understood, not a lot of research have been done on leadership dealing with “leading from the emerging future”, according to Scharmer and Kaufer (2013). Having so many complex problems in the world, an overload of information and the rapid development of technology, leaders need to “read” the future with the idea to act instantaneously as the future emerges. During the literature review, the researcher detected that Scharmer and Kaufer (2013) did some advanced work on motion leadership by postulating the three awareness levels in the U theory. This U theory model is practical, and it is confirmed by this study that the generation of any new knowledge in networks is based on the openness of the system to move from ego- towards eco-awareness for sustainable development. Open systems that are interconnected and interdependent through effective motion leadership might fluidly send sustainable development goals throughout an open, sustainably developed planet by 2030.

The pyramid organisation (Chapter 2.5.3) with top-down management is not of value for systemic thinkers. Instead, organisations should be thought of as shapeshifters (Johansen, 2017), a structure that shapes itself to adapt and sustain itself. Organisations are liquid and self-managed, do not function in static frameworks and, according to Johansen (2017), are shapeshifters. The U-theory model is believed to be up to the task to handle shape-shifting organisations now and in the future. Shapeshifting organisations deal with areas that can be found on the edges of schools and districts as well as at provincial education ministries in Canada. It is at the fringes where innovation and diversity flourish, according to Johansen (2017). The U theory (2.4.3), as presented in Chapter 2, deals with the creation of new knowledge to address future problems. The evidence from this study suggests that schools across Alberta have peer mentoring and team mentoring in place. Connecting peers to change together shapes the culture of change where student leaders are evolving (Fullan & Edwards, 2017) all the time to act instantaneously on sustainable development problems

as they arise. According to Johansen (2017), organisations (education systems) create structure for themselves and will no longer comprise teams of teams.

These structures have to be flexible all the time – no one will be at the helm leading; there will be system leaders, but their task is limited to rearranging others around them. Because of the limited scope and constraints of this study, such as scarce resources and limited time spent on-site and with school leaders, it is not clear from the viewpoint of the researcher whether Alberta education has reached the institutional inversion state as of date. However, the result of this is that personalised learning, peer learning and the six deep-learning skills take priority at schools, leading to personal inversion and relational inversion. Given that leadership lies on the edges, the inverted institution (Johansen, 2017) is a place where innovation, creativity and entrepreneurship thrive. These leaders on the fringes or edges (see Figure 2.11, with special reference to Figure 4) are inverted persons (personal inversion (see Chapter 2.11), turned upside down, inside out (*Umstulpung*; Scharmer & Kaufer, 2013). When individuals are upsized and influence those around them to become upsized, the future is sustainable. According to Johansen (2017), transformation moves faster without central authority and, at the same time, empowers diversity. The same, Johansen suggests, is true for the emerging digital world where one can find platforms for distributed computing at the edges of the internet such as block chain (artificial intelligence). Diversity will lead to the best outcomes and ensure connectivity.

### **5.2.1 Artificial intelligence for eco awareness**

As was pointed out during the study, whole systems need to move from ego-awareness towards eco-awareness. An important issue not mentioned in the main body of literature review in Chapter 2 is that of shapeshifting and digital intelligence. It became clear to the researcher that technology would play a crucial role in the shift of consciousness from ego- to eco-awareness and has to be mentioned. Motion leaders have the role to work with artificial intelligence. In the same way that memes spread, so do memes (for technology) spread (Chapter 2.2; Blackmore, 2013). Media ecology already starts to bring technological sophistication and connectivity such as virtual reality (Johansen, 2017), which combines mixed reality – virtual with humanity that ties everything in the same ecological system. Distributed leadership between human and avatar symbiosis may combine strengths and weaknesses of both machines and humans. Distributed leadership (motion leadership) increasingly comes from both human and artificial intelligence (Johansen, 2017). Another

significant aspect of this topic is that the deep learning skills (see Chapter 2.5.1) the Hewlett-foundation identified as 21<sup>st</sup>-century learning skills/global competencies for lifelong learning, the researcher believes are probably chosen for their adaptive nature to the computing world. There will be many challenges for human consciousness to interlink with artificial consciousness.

Distributed computing such as artificial intelligence can send fluid data with the speed of light through the networks; maintain high-trust in low trust environments; and works from the centre (Johansen, 2017). Universal wisdom serving the Self or communitarian I connects human consciousness with that of all living species such as animals, plants, etc. (see Chapter 2.2). Interconnected and trans-disciplinary vision does not stop there. Human skills need to be adaptable with artificial intelligence (Johansen, 2017). Deep learning prepares people to compete effectively with machines and or to work effectively alongside them in what Johansen (2017) calls blended-reality presence. Deep learning gives people the skills to work with knowledge. Fullan and Edwards (2017) hope to help pave the way for the global community to move to successful technology-based education. Future studies on distributed computing and distributed human effort for sustainable development may measure the progress in these processes.

### **5.2.2 Chapters 2 to 5**

This section described the summaries of Chapters 2 to 5. It has to do with the formulation of the main research question: What should the role of motion leadership be to implement sustainable development principles in secondary schools? The first sub-question would then be: What is a systemic worldview? This would then be followed by asking how motion leadership can support change and, lastly, to determine the role of motion leaders in the implementation of sustainable development principles in secondary schools.

Chapter 2 provided a literature study to create a firm foundation on which to pose the relevant research questions presented in the interview schedule. The reader got a detailed look on the systemic approach to bring the three divides together by using the power of awareness or consciousness, not policy (Chapter 2.5). Collective habits of thoughts and the actions they produce reproduce a world that is sustainable wherein the individual is connected with a higher order to serve the whole. Organisations are part of the larger ecosystem, as discussed by Johansen (2017), in that leaders need to be well linked to



society and the planet, meaning eco aware (Chapter 2.4.3; 2.5.2; Figures 2.2; 2.8) to understand, respect and learn from nature's patterns. According to Johansen, leaders are those with energy in themselves (Chapter 2.4.3; Figure 2.5), having a sense of grounding to maintain a centre all the time and being spiritual in the sense of having bio-empathy (Chapter 3.5.3). Bio-empathy means that one sees things from nature's point of view and adjusts accordingly to suit both human and nature.

Well-being for leaders are very important. Johansen (2017) states that leaders need to manage themselves, as well as encourage and model positive energy in others (Chapter 2.5.2; 2.5.2.3). Johansen continues by stating that leaders of the future need to be mindful (Chapter 2.5.2), that is, being well – physically, spiritually and mentally – and have grit if they want to take on leadership roles. According to Johansen, mindfulness implies that one applies the principles of mindfulness (Chapter 2.4.3; 2.5; 2.5.1-3; 2.7), as seen in the most recent research on neuroscience (Chapter 2.3; 2.5.1) in daily living. Inquiry education teaches deep-learning skills and these skills foster neural connections (Burton, 2013). According to Burton, because the brain is superb at pattern recognition, recognition takes place unconsciously. To know is a feeling and part of a large mental sensory system, which all form part of the mind – awareness, the process of life. The key element of sustainable development is to know the process of life. The Santiago theory of cognition (Chapter 2.3) combines the matter and mind (Chapter 2.5.2.3), meaning all on the planet are interconnected. The sustainable development goals give the self (leader) the ability to adapt to anything in their environment. In this case, learners are familiar with the sustainable development environment and therefore can decode interrelations and procedures because they are adapted to the domain of sustainable development and can therefore tweak problems, solve problems and create new possibilities. Reintegration of the mind and matter enables leaders to act from the now, from the present moment into the future (Chapter 2.5.2.3). Institutional inversion happens when the boundaries of an organisation move outside the edges. At the edges (Figure 2.11), one finds diversity, and where diversity is, is innovation (Johansen, 2017).

Inverted institutions interconnect with one another and Chapter 3 reported on the research method and strategy used to conduct this study. The research design was explained along with the research paradigm. Chapter 3 also presented and discussed the purpose, objectives and paradigmatic approach to the study, the research design and collection and

analysis of the data. Ethical considerations of the credibility and trustworthiness were discussed. Case studies as discussed in Chapter 3 are concerned with rich descriptions of events relevant to the case, namely the role of motion leadership in the implementation of sustainable development principles at Alberta secondary schools. The researcher employed a single case study with semi-structured and individual interviews and analysis of documentation. The qualitative approach was used to understand and explain the role of motion leadership. The rationale for choosing the qualitative research method lies in the fact that the participants gave first-hand information of their experiences. Data gathered through interviews reflected each participant's thoughts and was a grand way to preserve the participants' experiences. The researcher conducted non-participant observations of principals, assistant principals and teachers going about their leadership practices. This enhanced the researcher's understanding of the role of motion leadership in the implementation of sustainable development principles at Alberta secondary schools. In total, there were eight participants from three schools in the greater Calgary area.

Chapter 4 dealt with the analysis and discussion of data collected during the face-to-face interviews. The participants' own language was used in the quotes in order to give some of the exact responses to the questions asked. The honesty of the participants and their unique experiences that they shared during these interviews contributed to the richness of the study.

Chapter 5 presented a summary of the study and the research conclusions, which are stipulated once again using the research question and the sub-questions. Some recommendations are discussed next, followed by the avenues for future research. The limitations of the study were then explained, with concluding remarks at the end.

### **5.3 FINDINGS FROM THE STUDY**

The findings of the study will consequently be discussed with regards to the main and sub questions raised in Chapter 1.

#### **5.3.1 A systemic worldview survives because of openness**

A systemic world moves in patterns and systems with no one outside the holistic system (Capra & Luisi, 2014). Therefore, motion leadership creates environments where people learn to operate as individuals within a holistic system for the common good of society. All

in the new world as seen by the World Economic Forum will need to possess the top skills to survive in a systemic world. These skills help the system to survive with the highest aim foremost and only to keep the earth alive (Capra & Luisi,2018) and one can see that it all has to do with engagement between various people and their behaviour, the correct behaviour (emotional intelligence) so that the individual can serve the whole system. Such skills to serve the highest good of the earth are :

(World Economic Forum retrieved from <https://www.weforum.org/agenda/2016/01/the-10-skills-you-need-to-thrive-in-the-fourth-industrial-revolution/>)

- Emotional intelligence
- Problem solving skills
- Creativity
- Coordination with others
- Service orientation
- Cognitive flexibility
- People management
- Critical thinking
- Negotiation
- Judgment and decision making

These skills are made possible through the six deep learning competencies Fullan, Quinn & McEachen (2018). The relationship between sustainable development or systemic worldview and motion leadership (Fullan,2009) goes hand in hand since everything is connected whereby all species are engaged in the same process, the process of life (Capra & Luisi,2014). Fullan, Quinn & McEachen (2018:xiii) emphasize that this includes all humans, both adults and children. Engagement and equality (Fullan, Quin & McEachen,2018) leads to forward movement towards change. A Systemic worldview requires every species to be interconnected with the other which includes, humans, plants, insects, the whole cosmos wherein each species have equal value (Capra & Luisi, 2014). Sustainable development requires re-earthing or self-realisation from each individual to gain the eco-centric perspective. The participants did not indicate whether they believed

one or the other worldview, namely in a holistic or not. In order to touch on the research question as how motion leadership can support change, the researcher tried to find out whether participants were willing to make a shift from ego awareness to eco awareness at all. The researcher concluded that, because participants were in favour of implementing 21<sup>st</sup> century competencies throughout their schools, they were willing to make the shift from ego- to eco-awareness.

All three principals and assistant principals of the three schools were asked whether they thought the values and beliefs of Alberta Education differed from their core beliefs. The answers varied from a definite “no” to an “I don’t think so”. Systemic thinkers think, do and act in terms of connectedness, relationships, patterns and context. The elements of an individual are the elements of the whole, which none of the parts have. The researcher also investigated as to how and whether motion leaders play a role in the implementation of sustainable development principles in schools?

From what the researcher heard from the participants, the participants in general were focused on individual learning outcomes, concentrating on grades and personal mastery. At the same time, the participants were in favour of group work, interaction and sharing resources with others. With the exception of two participants, none had any concerns regarding what worldview learners held. Worldview was of personal concern for participants and 80% of the participants said they could change their worldview if they saw the rationale behind that. The other 20% of the participants preferred learners to have the same worldview the school subscribe to; yet, learners with different views were welcome at their schools as long as they adhered to the mission statements of the school in broad terms. Fullan, Quinn & McEachen (2018:15) make it clear that a common language and shared goals is a requirement for change which refers to the question as why motion leaders should play a role in the implementation of sustainable development principles in schools.

Participants shared many anecdotes about their various experiences pertaining to problem solving, as well as how to make things work for both parties, including many examples of peer learning and collaboration inside and outside their schools. The documents by Alberta Education (Chapter 4.1) constantly underlined the importance of diverse groups sharing their uniqueness with one another. Sharing eventually mounts to acceptance and then connectedness between diverse groups.

All three schools that the researcher interviewed provided personalised (Chapter 4.4.2.1) learning to learners. Personalised learning (Chapter 2.4.3) is customised to the prior knowledge, beliefs and behaviours learners bring to school and then deep learning skills are practised and developed through customisation. The researcher realised the learners moved back and forth from a personalised environment to a community-based environment (Chapter 2.5.1). The question as how motion leadership can support change and implement sustainable development principles in schools was largely answered because strong traces of motion leadership became evident since the whole functioning of learning at the schools was not only personalised and socially connected but embraced deep learning. According Bellance (2015), in advocating for the advancement of a new agenda for sustainable development, emphasizes need the six deep learning skills yet have a good balance, with individual learning opportunities. Self-regulated leaders stepped in and out of themselves to create learning flow at the schools, thereby forming close relationships with everyone at the schools.

### **5.3.2 How motion leadership can support change and improve sustainable development principles**

#### *5.3.2.1 Wave good-bye to the blind spot*

The motion leader's ability to overcome the blind spot (Chapter 2.5.2.4) supports change; in other words, to be able to identify possible problems that might arise in the future and then to see the self as part of this process while acting on whatever might arise from that moment. All the participants explained how they operated from a trusting and caring position, putting themselves in the shoes of another, other who might differ from them. Leaders focused on the team over self – always ready to let go of what they knew to make space for the new to come. The participants demonstrated how they put themselves in positions to open themselves up to critique. The eight participants were ready to let go of what they knew if another party convinced them to change their own position. A few participants used the example of an unhappy parent approaching them. One of the participants said he/she was always aware of the blind spot (Chapter 2.5.2.4) in the inner self. Listening to all the participants, the researcher can testify that all of them, in different ways and manners, made it clear that they were prepared to put the beam of observation on themselves to see where they might have some blind spots standing in the way between them and someone else about school issues.

### *5.3.2.2 Leaders' outsize ego – The Buddah Pill*

*The Buddah Pill* is a book written by Farias and Wikholm (2015), who share their experience on some of the good, but especially the dark side of meditation. To outsize the ego, people go through meditation in a state of being. UNESCO calls it “to be”, one of the four pillars of education as seen by UNESCO. “To be” brings a person into a state of being where the self becomes unattached to emotions and negative cravings and desires. The researcher was on the cautious side in that schools had not done enough research on meditation to justify its continuous growth in schools and communities. According to Farias and Wikholm (2015), mindfulness can run havoc in various severe forms of damage to people’s minds. From the interviews, none of the participants shared the same concerns and overall they were very much in favour of the benefits of meditation in schools, although when asked, were not sure what exactly they were.

One participant in particular shared how important yoga and meditation were and this particular participant regularly did yoga. Another mentioned the importance of becoming disconnected from the world. One school acknowledged they were still in the beginning phases of mindfulness programmes. School across Alberta offer a yoga course from Grade 10-12 level. Many other well-being programmes are offered at the schools in the form of emotional-intelligence programmes, emotional IQ courses, etc., incorporate meditation, mindfulness and yoga. Through these meditation programmes, learners are supposed to learn to focus on the self to become self-aware.

### *5.3.2.3 Borderless migration spread sustainable development*

Motion leaders create opportunities for teachers and students in their schools, for principals of schools across Alberta and from the Ministry of Education in Canada, for the education governments across the country to change whole systems for sustainable development. Change in whole systems means to create and share knowledge and from that, emerging wisdom comes forth. Leading the change across networked borders (Chapter 2.6; Johansen, 2017) was evident from the participant’s answers. A few of the participants shared experiences from things they did at schools to see the change. A participant told the researcher their school helped learners towards an open mind, open heart and open will (Figure 2.10) and therefore they had students after graduation serving the common good as doctors, nurses, teachers, lawyers. One participant had the same line of thought, saying

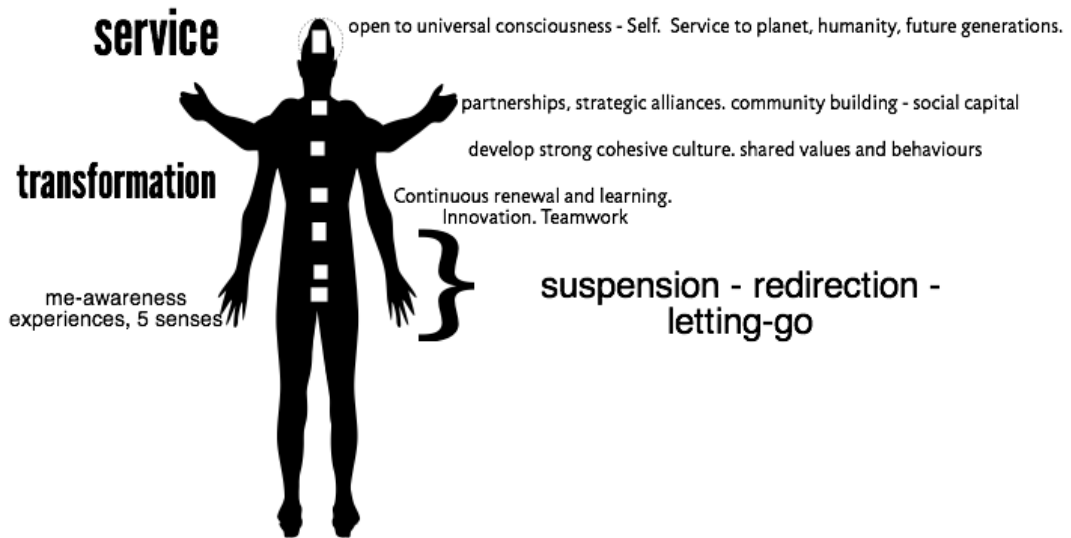
because of the open mind, heart and will (see Chapter 2.5.1), their students could ask themselves what their purpose was (see Chapter 2.4) in life. All participants appealed to the same ideas as mentioned, namely that learning took place across borders beyond their school.

## **5.4 RECOMMENDATIONS**

Based on the findings of the study in Chapter 4, the following recommendations that can serve as strategies are made towards the improvement of the role of motion leadership for sustainable development at secondary schools in the province of Alberta.

### **5.4.1 Recommendation to remain clear and focused on vision**

Principals, assistant principals and teachers as well as students should be helped to know and desire to fulfil their moral purpose, namely service to the planet as stipulated in the philosophy of sustainable development, also as seen in the 17 sustainable development goals. A comprehensive understanding from teachers, students, parents and the larger community on what sustainable development is, the 17 sustainable development goals, is necessary. From the findings in the study, moral purpose gets attention in various ways, such as in the curriculum, staff meetings and conferences, in the Alberta Education Wellness Programmes. Yet, the concept of what sustainable development is the idea of each person being part of the network and the goal of existence in the network as discussed in the literature review in Chapter 2, “Who am I? What is my purpose?” is not holistically fleshed out in schools and districts. Participants used some of the concepts such as referring to a purposeful life, mindfulness, service. Some used the lexicon of sustainable development principles but none of the participants drew direct lines between sustainable development and their role as teachers to accomplish the goals set by 2030.



**Figure 5.1: From me-to-we awareness**

#### **5.4.2 Recommendation for performance data transparency**

Change towards the future, a sustainable future that erases poverty and bring equality for all species according to the United Nations' Education for Sustainable Development, allows each system citizen to see they are part of the whole. Assistance could be given for assessments for all staff at schools as well as students to measure newly acquired learned skills, as seen in the six deep-learning skills. From the interviews and document analysis and findings it was clear that, to a greater and lesser degree, participants incorporated deep-learning competencies in the curriculum, during staff meetings and when they reached out to the parents and wider community. However, the perception is that these skills are built around the curriculum and that the main focus is to have academic knowledge or subject knowledge. Group work, project work, peer learning and building trust for the participants meant that such deep-learning skills practised and experienced during the project work would enhance academic excellence. Participants, from what the researcher perceived, could not see very clearly at that point that skills enabled each system citizen to fulfil their moral purpose in the system of life, namely to serve the whole and therefore needed these skills, as discussed in Chapter 2, namely character building, citizenship, work with creativity, innovation, collaboration, open communication and critical thinking. Participants still spoon-fed students with knowledge and skills and did not see themselves as part of the leader-learner system. Deep-learning competencies only master core academic content; the real focus is on everyone at the school and outside the school to



acquire new knowledge, apply what they learn and use that to create new knowledge, and then create more new knowledge (see Chapter 2.4.3 for memes and building new memes on old ones). With regard to teacher capital, Fullan and Edwards (2017) believe efforts in schools from school staff such as administrators and teachers and educational assistants are superficial. Monitoring effects such as the deep-learning skills for everyone in the school requires accountability, transparency/openness and data charts. Putting faces on the data (Fullan & Edwards, 2017) and monitoring each one's progress in the deep-learning skills might speed up motion leadership for sustainable development; also, making core academic content the only criterion for assessment sends out conflicting messages. Instead, core academic content, together with each individual learning skill, could continuously be measured on an ongoing basis to keep everyone aware of his or her progress. Ego-development assessment every now and again will provide an idea where every system citizen lies on the ego- to eco-awareness scale.

#### **5.4.3 Recommendations for parent and wider community involvement and learning**

Making a seismic shift of mind-set in the culture towards sustainable development requires that everyone alive should be successful learners. Creating awareness among school leaders to involve the community is important. Commitment from the community can manifest itself by bringing parents into the school to assist in classrooms, on the sports field, doing garden projects and various projects. Accumulating parents and the wider community around a project in or from the school allows cross-border learning of the deeper learning skills, the moral purpose and practice community service. Integration of education at all levels to connect schools to the community creates civic capacity. The pattern of fragmented and fractious engagement of parent and community involvement is already present at all three schools, as seen in the findings, where School 3 built new facilities to integrate community life with school. Another school in the area form part of an integrated system where the school and community share educational services, the library and childcare, as well as continuing education services. However, for lasting results that move beyond shallow roots, ways to involve parents and the wider community to integrate and intermingle with every area of learning in schools ultimately to take up their position as system player in the web of life have to be found, all for the common good. Involvement should go beyond those who volunteer to reach every person to cohere and therefore service to the common good.

- Findings in this study showed that wellness programmes at schools are implemented, at some schools more than at others. Even though wellness programmes are in their infant shoes, it remains a seedbed to spread self-awareness, self-management, empathy – also bio-empathy – social skills and mindfulness to a wide community. Train everyone, the school leaders, teachers, students, parents and wider community to know how they can improve their learning through the wellness programmes with emphasis of letting everyone know there is a focus on the inner, outer and ecological awareness. When people know where to they aspire, it makes the system more open. There are currently too much rhetoric and sporadic information of what change looks like. Opening the mind, heart and will might require strategic focus, but once it is in place, the process of education for sustainable development will be smoother. In a VUCA world (volatile, uncertain, complex and ambiguous – Johansen, 2017), innovation is key to flip and uplift the other side of the coin – complexity to clarity, ambiguity to agility.
- Despite profound potential for accelerating progress on the sustainable development goals (SDG) in the world, technology progress runs ahead of human development. All leaders will have to be digitally perceptive. There will be plenty of media choices to make and with the blended-reality world upon us (Johansen, 2017) leaders need to think into the future to be ready for what is coming. Leaders are challenged to position their school districts to meet the needs of the future in the present, especially with technology in mind. Motion leadership for sustainable development in a new kind of reality, one in which physical and digital environments, media and interactions are woven together throughout our daily lives will constantly re-invent itself, each person and technology. Constant re-inventing of the self (as discussed in the literature review in Chapter 2) requires acting I-IN-THE-NOW (Figure 2.4). Blended reality will constantly change people’s sense of the self and of others and their beliefs. The researcher recommends that school policy makers keep this in mind and monitor motion leadership as well as digital progress in a transparent way.

## **5.5 LIMITATIONS TO THE STUDY**

The study focused on the role of motion leadership towards sustainable development at Alberta secondary schools. There are two main limitations to this study.

One more participant would be beneficial to bring a third perspective to School 3's involvement in motion leadership towards sustainable development, but unfortunately the participant did not do the interview and the school did not offer to send someone in the participant's place.

A third data collection instrument could have increased the true value of the study. Only semi-structured interviews and document analysis were used to collect data for the study. One more data collection instrument could have been handy to triangulate and increase the true value of this study. Class visitation, sitting in at teacher meetings or any onsite activities could give a far broader view of the nature of leadership in each school. The ideal would be to visit each schools a couple of times to flesh out the understanding of the research problem.

## **5.6 AREA FOR FUTURE RESEARCH**

Future researchers could consider the impact of the deep learning skills/competencies regarding the progress made and the existing research results as given by the Hewlett foundation's (Warkentien,2017) deeper learning research project between 2010-2015 on leadership. From the research results, future researchers may want to observe whether the outcomes are effective for motion leaders to lead through intrinsic, entangled networks that have no centre and grow from the edges to spread sustainable living.

Further research should be done to find innovative ways to create deep learning whereby learners may learn to act out on the spot in effective ways. Learning by doing or learn on the job, as discussed in the literature review in Chapter 2, enables leaders to allow and even embrace failure in order to learn from that. Allowing people at the school to make mistakes helps them to become courageous to innovate and create. Research can include the intelligent and responsible use of media and artificial intelligence may contribute to innovations for leaders at their schools to implement sustainable development.

Further research should be done on effective ways and means whereby school leaders may lead their schools to incorporate community involvement through their school on a continuous and involuntary basis. Currently, school involvement from the community is only voluntary. Engagement from principals in particular is in still in its early stages and therefore more research and practice need to build a bank of information as how to make the

boundaries permeable on a permanent and most effective way. For instance, how can schools and the community work together in and out of the classroom every day?

## **5.7 CONCLUSION**

This chapter concludes this study. The purpose of this study was to explore the role of motion leadership for the implementation of sustainable development at Alberta secondary schools. Motion leadership entails doing on the job, day by day (Fullan, 2010), having a positive influence on others around the leader towards sustainable development. Working for a better world, according to the UN, is a selfless giving to the common good, which is at the root of peace and equality. Fixing the broken system of the industrial world into one holistic whole, integrating the social-, eco- and spiritual divide make quantum strides to a coherent community where earth, living species and the digital world are integrated. Collective altruism is the end goal of motion leaders who implement sustainable development. Born (2014) describes collective altruism as follows: the individual receives personal benefit when he/she acts for the good of the whole. For Born (2014) to seek meaning in life and finding purpose is a spiritual experience – like the prism concentrating light, that is merging individual altruism and collective purpose to radiate energy. Self-realisation involves the recognition of our own highest Self as seen in chapter two of this study. The United Nations says sustainable development addresses human wellbeing to transform human beings on a large scale to bring true and sustainable transformation. That is why mindfulness/yoga is crucial – yoga meaning union. The United Nation's international yoga day in pursuit of human wellbeing addresses the inner nature of humanity to obliterate individual boundaries, not on the intellectual level or by belief, but as a living experience.

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## APPENDICES



### APPENDIX 1: PERMISSION TO DO RESEARCH IN CANADA

19 April 2017

Dear Prof Nico,

Please see below the communication between Mrs du Preez and AISCA Office in Calgary, Canada. No need for additional ethical clearance certificates, as these schools are private schools in Canada. Can Mrs du Preez make contact with individual schools and begin the process to collect the data for her studies?

My kindest regards,

Dr Paul Triegaardt

Supervisor

20 April 2017

Dear Dr Triegaardt

The student can begin the process to collect data as these are private schools and no extra ethical clearances are needed in Canada.

My kindest regards

Prof RJ (Nico) Botha

Chair of DHDC



- Forwarded message -----

From: **AISCAOffice** <[office@aisca.ab.ca](mailto:office@aisca.ab.ca)>  
Date: Thu, Mar 30, 2017 at 9:36 AM  
Subject: RE: Connie: Doing research for Med Degree  
To: [marikadp8@gmail.com](mailto:marikadp8@gmail.com)

Good morning Ms. Du Preez:

You had contacted the AISCA office in January with the same request. I have copied your original e-mail and my reply below. Our answer to your second request is the same; we do speak on behalf of individual schools regarding whether or not they are willing to participate in your research and therefore cannot provide you the letter you are requesting. If we have misunderstood your request, then please have your research coordinator from the University contact our office.

Again, we regret that we cannot assist you in this matter and wish you all the best in your research.

Regards,

Connie St. Laurent  
Administrative Assistant  
Association of Independent Schools and Colleges in Alberta (AISCA)

Web: [www.aisca.ab.ca](http://www.aisca.ab.ca)  
Email: [office@aisca.ab.ca](mailto:office@aisca.ab.ca)  
Phone: [780.469.9868](tel:780.469.9868)  
Fax: [780.469.9880](tel:780.469.9880)

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Preller Street, Muckleneuk Ridge, City of Tshwane  
PO Box 392 UNISA 0003 South Africa  
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150  
[www.unisa.ac.za](http://www.unisa.ac.za)

Our original reply – January 3, 2017

Good afternoon Ms. Du Preez:

If you wish to interview school principals and staff at private schools in Alberta then I would suggest that you refer to the AISCA website at [www.aisca.ab.ca](http://www.aisca.ab.ca) under the members tab for a list of our members and their contact information. You would have to contact each school separately to see if they would be willing to be interviewed for your research.

Good luck with your master's studies!

Regards

Connie St. Laurent Administrative Assistant

Association of Independent Schools and Colleges in Alberta (AISCA)

Web: [www.aisca.ab.ca](http://www.aisca.ab.ca) Email: [office@aisca.ab.ca](mailto:office@aisca.ab.ca) Phone: [780.469.9868](tel:780.469.9868)

Fax: [780.469.9880](tel:780.469.9880)

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**From:** Marika Du Preez [<mailto:marikadp8@gmail.com>]

**Sent:** Tuesday, January 03, 2017 2:21 PM

**To:** AISCAOffice

**Subject:** Regarding: Doing research for Maste's studies in Education in AISCA'S schools

Good day,

I am hoping that you can direct me to someone who will be able to say how and if one can conduct research in schools within the AISCA district? I am a part-time teacher at one of the AISCA'S schools in Calgary and was wondering if I may conduct interviews with school principals and staff for the completion of my Master's in Education Leadership from the University of South Africa.

My research is about motion leadership in schools. I will be able to provide ethical clearance from my university and all other documents and clearance letters.

Regards

Marika



## APPENDIX 2: ETHICAL CLEARANCE UNISA

Date: 2017/02/15

Mrs du Preez,

**Decision:** Ethics Approval from  
2017/02/15 to 2019/02/15

Ref: **2017/02/15/33098182/26/MC**

Name: Mrs MC du Preez

Student no: 33098182

**Researcher:**

Name: Mrs MC du Preez

Email: marikadp8@gmail.com

Telephone: 1 403 366 2499

**Supervisor:**

Name: Dr P Triegaardt

Email: paul.triegaardt@gmail.com

Telephone: +971509358073

**Title of research:**

**Motion leadership towards sustainable development in Canadian  
secondary schools in Alberta province**

**Qualification:** M Ed in Education Management

Thank you for the application for research ethics clearance by the UNISA College of Education Ethics Review Committee for the above mentioned research. Ethics approval is granted for the period 2017/02/15 to 2019/02/15.

*The medium risk application was reviewed by the Ethics Review Committee on 2017/02/15 in compliance with the UNISA Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.*





1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the UNISA College of Education Ethics Review Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regard to the protection of participants' privacy and the confidentiality of the data should be reported to the Committee in writing.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.
7. No fieldwork activities may continue after the expiry date 2019/02/15. Submission of a completed research-ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

*Note: The reference number **2017/02/15/33098182/26/MC** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee*

Kind regards

**Dr M. Claassens**



**Prof V McKay**  
**CHAIRPERSON: CEDU RERC EXECUTIVE DEAN**  
mcdtc@netactive.co.za

Approved - decision template – updated 16 Feb 2017



**APPENDIX 3: PERMISSION TO DO RESEARCH:  
SCHOOL A**

May 3, 2017

Maria C du Preez 248 Mt Victoria PI  
Calgary Alberta  
Phone: 403 366 2499  
Email: marikadp8@gmail.com

Dear

I am Maria Catharina du Preez and is doing research towards my Master of Education degree at the University of South Africa. My appointed supervisor is Dr Paul Triegaardt.

We invite you to participate in a study entitled ***Motion leadership towards sustainable development at Canadian secondary schools in Alberta Province.***

The aim of the study is to explore the level of ***motion leadership towards sustainable development at secondary schools.***

The objectives of my study are to:

- define a systemic worldview and motion leadership;
- explore how motion leadership can support change and improve sustainable principles at secondary schools;
- establish the role of motion leaders in the implementation of sustainable principles at schools; and
- offer strategies and recommendations that might serve as guidelines to implement sustainable principles at secondary schools.

Your school board has been selected because it plays an important role in the Calgary area as an independent religious school. The study will entail a less than 30-minute face-to-face interview with each potential participant like yourself and two other staff members of your choice (if possible). The goal is to select some secondary schools purposefully

and interviews will be conducted with the principal, assistant-principal and one teacher at each school. No follow-up sessions will be conducted. All information and potential participant's names as well as the name of the school will be kept strictly confidential at all times.

The benefits of this study are that it can help educational leaders to evaluate the *role of motion leadership in the implementation of sustainable principles at Canadian secondary schools in Alberta Province.*

Potential risks are minimal.

Feedback procedure will entail a copy of the study once it has been completed.

Yours sincerely



Maria C du Preez  
Student



Dr Paul K Triegaardt  
Supervisor



## APPENDIX 4: PERMISSION TO DO RESEARCH: SCHOOL B

Maria C du Preez  
248 Mt Victoria Pl  
Calgary  
Alberta

Phone: 403 366 2499

Email: marikadp8@gmail.com

26 April 2017

Dear

I am Maria Catharina du Preez and is doing research towards my Master of Education degree at the University of South Africa. My appointed supervisor is Dr Paul Triegaardt.

We invite you to participate in a study entitled ***Motion leadership towards sustainable development at Canadian secondary schools in Alberta Province.***

The aim of the study is to explore the level of ***motion leadership towards sustainable development at secondary schools.***

The objectives of my study are to:

- define a systemic worldview and motion leadership;;
- explore how motion leadership can support change and improve sustainable principles at secondary schools;;
- establish the role of motion leaders in the implementation of sustainable principles at schools;; and
- offer strategies and recommendations that might serve as guidelines to implement sustainable principles at secondary schools.

Your school board has been selected because it plays an important role in the Calgary area in individualized learning that is of self--directed nature. The study will entail a less than 30--minute face--to--face interview with each potential participant like yourself and two other staff members of your choice (if possible). The goal is to select potential secondary schools purposefully and interviews will be conducted with the principal, assistant--principal and one teacher at each school. No follow--up sessions will be conducted. All information and potential participant's names as well as the name of the school will be kept strictly confidential at all times.

The benefits of this study are that it can help educational leaders to evaluate the *role of motion leadership in the implementation of sustainable principles at Canadian secondary schools in Alberta Province.*

Potential risks are minimal.

Feedback procedure will entail a copy of the study once it has been completed.

Yours sincerely

Maria C du Preez  
Student

Dr Paul K Triegaardt  
Supervisor

APPENDIX 5: PERMISSION TO DO RESEARCH:  
SCHOOL C

Maria C du Preez  
248 Mt Victoria Pl  
Calgary  
Alberta

Phone: 403 366 2499

Email: marikadp8@gmail.com

26 April 2017

Dear

I am Maria Catharina du Preez and is doing research towards my Master of Education degree at the University of South Africa. My appointed supervisor is Dr Paul Triegaardt.

We invite you to participate in a study entitled ***Motion leadership towards sustainable development at Canadian secondary schools in Alberta Province.***

The aim of the study is to explore the level of ***motion leadership towards sustainable development at secondary schools.***

The objectives of my study are to:

- define a systemic worldview and motion leadership;;
- explore how motion leadership can support change and improve sustainable principles at secondary schools;;
- establish the role of motion leaders in the implementation of sustainable principles at schools;; and
- offer strategies and recommendations that might serve as guidelines to implement sustainable principles at secondary schools.



Your school board has been selected because it plays an important role in the Calgary area. Also, you are the head of an IB school with direct relations to the UN philosophy and goals. The study will entail a less than 30--minute face--to--face interview with each potential participant like yourself and two other staff members of your choice (if possible). The goal is to select three secondary schools purposefully and interviews will be conducted with the principal, assistant--principal and one teacher at each school. No follow--up sessions will be conducted. All information and potential participant's names as well as the name of the school will be kept strictly confidential at all times.

The benefits of this study are that it can help educational leaders to evaluate the *role of motion leadership in the implementation of sustainable principles at Canadian secondary schools in Alberta Province.*

Potential risks are minimal.

Feedback procedure will entail a copy of the study once it has been completed.

Yours sincerely

Maria C du Preez  
Student

Dr Paul K Triegaardt  
Supervisor

## APPENDIX 6: LETTER OF CONSENT AND ASSENT

**Maria C du Preez**

**248 Mt Victoria Pl**

**Calgary**

**Alberta**

**Tel: 403 366 2499**

**Email: marikadp8@gmail.com**

September 6, 2016

**Title: The impact of motion leadership in ensuring sustainable development in Canadian Schools**

### **Dear Prospective Participant**

My name is Marika du Preez and I am doing research with Dr Paul Triegaardt, senior lecturer in the Department of <insert department name> towards MEd at the University of South Africa. We are inviting you to participate in a study entitled *The impact of motion leadership in ensuring sustainable development in Canadian Schools*

### **WHAT IS THE PURPOSE OF THE STUDY?**

I am conducting this research to find out what the role of motion leadership is on the development of deep learning skills

### **WHY AM I BEING INVITED TO PARTICIPATE?**

Why did you choose this particular person/group as participants?

I obtained your details from your connection with your high school. I first randomly chose three high schools within the Calgary Board of Education district. Afterwards, I asked each one of the principals and assistant principals to partake in the study. I then randomly chose a teacher from each school who are willing to partake in this study. I got your personal information on the schools website that is open to the public.





### **WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?**

Describe the participant's actual role in the study.

The study involves *semi-structured interviews*. All questions during the interview are open ended in nature. The questionnaire is asked in a sentence completion form. Thirty minute one on one interviews are conducted. There will be no follow-up sessions.

### **CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?**

Participating in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason. If you do not feel comfortable during the interview, you are welcome to stop the interview at any time. No one's identity will be exposed and personal data will be anonymized.

### **WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?**

You may find the interview to be very enjoyable and rewarding. By participating in this research, you may also benefit others by helping educators understand the role of motion leadership better.

### **ARE THERE ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?**

There are no anticipated risks or discomforts related to this research.

### **WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?**

*Interviews will be confidential.*

Your name will not be recorded anywhere and no one will be able to connect you to the answers you give. Your anonymity will be kept throughout. Your answers will be given a code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. While the interviews will be tape-recorded, the tapes will be destroyed once they have been typed up.

Your anonymous data may be used for other purposes such as journals read by educational leaders. At no time, however, will your name be used or any identifying information revealed.



## HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?

Approved - decision template – updated 16 Feb 2017

Hard copies of your answers will be stored by the researcher for a period of five years in a locked cupboard/filing cabinet in Calgary at my home for future research or academic purposes; electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. The transcriber is an outsider living in South Africa and will maintain confidentiality by signing a confidentiality agreement. The typed interviews will NOT contain any mention of your school or name, and **any** identifying information from the interview will be removed. The typed interviews will also be kept in a password-protected format at the researcher's home. All information will be destroyed after 5 year's time.

## WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?

Your participation in this research is completely voluntary. If you decide to participate, you will receive \$50 cash for your time and trouble if you complete the interview and allow me to use the data for the research project.

## HAS THE STUDY RECEIVED ETHICS APPROVAL

This study has received written approval from the Research Ethics Review Committee of the *University of South Africa*. A copy of the approval letter can be obtained from the researcher if you so wish.

## HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?

If you would like to be informed of the final research findings, please email Marika du Preez at marikadp8@gmail.com. The findings are accessible for one year.

Should you require any further information or want to contact the researcher about any aspect of this study, please contact

Should you have concerns about the way in which the research has been conducted, you may contact dr Paul Triegaardt, paultriegaardt@gmail.com. Alternatively, contact the research ethics chairperson of the University of South Africa Dr Madaleen Claassens ([mcdtc@netactive.co.za](mailto:mcdtc@netactive.co.za))

Thank you for taking time to read this information sheet and for participating in this study.

Thank you.

Marika du Preez



University of South Africa  
Preller Street, Muckleneuk Ridge, City of Tshwane  
PO Box 392 UNISA 0003 South Africa  
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150  
[www.unisa.ac.za](http://www.unisa.ac.za)

**CONSENT TO PARTICIPATE IN THIS STUDY (Return slip)**

Approved - decision template – updated 16 Feb 2017

I, \_\_\_\_\_(participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of the face-to-face interview.

I have received a signed copy of the informed consent agreement.

Participant Name & Surname (please print) \_\_\_\_\_  
\_\_\_\_\_

Participant Signature

Date

Researcher's Name & Surname (please print) \_\_\_\_\_

Researcher's signature

Date



## APPENDIX 7: INTERVIEW SCHEDULE /QUESTIONNAIRE

### 1. Opening

My name is Marika du Preez and as a student in educational leadership, I thought it would be good to interview you to form a better idea of what I am looking for to share it with others. I would like to ask you some questions, but you are under no obligation to answer them if you do not want to. However, the slightest input will help to explore and extend the idea of leadership in schools here in Alberta. I do hope to use the information obtained from you to complete my master's studies and to have a better understanding of the influence of motion leadership on the common good. Let me start by asking you some questions about where you live and about your background. The interview should take about 30 minutes. Do you have any questions at this time?

### 2. Biographical Data

1. Age

2. Gender

3. Years of classroom teaching experience

4. Years of educational leadership experience

5. Current job description at school

**3. I designed all the questions myself for the purpose of the interview. Questions are compiled based on the literature of chapter 1 and 2. Not all questions will be asked. However, all questions relate to the same outcomes.**

**4. Topics for discussion during interview in order to provoke discussion – social capital and mindfulness**

These topics are linked to chapter 1 and 2. In addition, these topics will lead to the exploration of motion leadership and sustainable development principles and mindfulness.

**The main two questions:**

**Do you believe teachers, parents and students should work as a network together in planning and executing tasks at the school?**

**Why do you believe that self-awareness and ego development plays an important role in leadership?**

**These two main questions will be answered through the following questions:**

Types of questions	Examples of some questions	Participants' response
<p><b>About social networks; social interaction</b></p>	<ul style="list-style-type: none"> <li>• Do you have formal professional development sessions at our school</li> <li>• Do you have team building sessions</li> <li>• Do you, at times, been put together with teachers who do not get along together to focus on a project?</li> <li>• Would you say that forced conversations lead to conversations and interactions outside of the context of professional development?</li> <li>• Do teachers in the school create curriculum together</li> <li>• Do you like peer observation and see it as a learning opportunity?</li> <li>• Does the school give you opportunity to connect with other educators outside your own school</li> <li>• Emotional happiness and mental health plays a significant role in a teacher's life, would you give an opinion on this statement?</li> <li>• How important do you think yoga for teachers is?</li> </ul>	
<p><b>On mindfulness</b></p>	<ul style="list-style-type: none"> <li>• Do you trust the leaders at your school?</li> <li>• Do you believe teachers should share their learning</li> </ul>	

<p><b>Trust and reciprocity questions</b></p>	<p>material and practices with each other?</p> <ul style="list-style-type: none"> <li>● Should schools in your area collaborate instead of compete with each other?</li> <li>● Does your school strengthen community ties?</li> <li>● Do you like this idea?</li> <li>● Supporting a teacher from another school ...</li> <li>● The school gives me the opportunity to connect ...</li> <li>● Students work mostly in groups ...</li> <li>● Improving community ties ...</li> <li>● Does the school allow teachers to be independent thinkers?</li> <li>● People generally trust the school board/or not; which statement would you support and why?</li> </ul>	
---	---	--

**Possible follow-up questions that I might ask in no specific order and only serves as extra reference to keep the conversation going. This is only typed in a form-like format, but participants will not fill in any of these questions; it will only be discussed orally and only if needed.**

Questions about: Worldview	
1.	Would you say that you do understand your own worldview?
2.	Are you open to listen to others who have a different worldview from your own or do you believe that your own worldview is the only correct one and you do not want to listen to the views of others with a different worldview
3.	Do you remain approachable even when someone says he/she disagrees with your belief? Give a reason for your answer.
4.	Are you able to know and describe your personal weaknesses, should you be asked to do so. Let's talk about that.
5.	When someone disagrees with you, do you ignore them in future or do you try to listen to their concerns in order to find a middle way between your own worldview and theirs?

Questions about Higher self	
1.	Would you say there is a higher order or a spiritual order and tell me more about how you view that?
2.	Who you are and what is your purpose in life?
3.	Do you thoroughly examine your choices and your actions to guide your mission or not and can you tell me more about that?
4.	Would you say that your values are connected to what you think your higher self is?
5.	Would the school tolerate your values and if they do/don't, how do you see you going forth in the situation?
6.	Is it right to say that you connect your values to the good of the planet as well as you can? Tell me more about your view on this.

Questions about Mindfulness	
1.	Do you go to yoga classes?
2.	If you have the opportunity, will you incorporate mindfulness sessions in your class to calm the students down?
3.	Some believe that meditation can change you, what is your opinion on that?
4.	What is the possibility of change through meditation?
5.	Do you know that meditation techniques were devised to challenge who we think we are deeply? Would you support/not support this statement and tell me more about your thoughts on this
6.	How does personal change take place?

Social Networks	
1.	Teachers and student learning at this school
2.	Helping staff to share
3.	Building ties with my school and other schools
4.	The school's ties with families of students
5.	Partnerships with businesses
6.	Contributing to the success of other schools in the area

Trust and reciprocity	
1.	Most strangers can be trusted
2.	Establishing of an environment where teachers
3.	Staff and parents with personal problems
4.	The level of trust at this school
5.	Competition amongst teachers

Shared norms and values	
1.	Sharing a set of moral values
2.	Working and learning from one another
3.	The principal's responsibility
4.	Norms and values
5.	Staff with different moral values



Please complete all the sentences from your own perspective. You are welcome to add some more sentences should you wish to do so. You may want to use words such as *somewhat disagree, strongly agree, a waste of time, to the benefit of, a challenge, parents, learners, for the most part, seldom, improvement, etc.*

Social Network	
1.	Supporting a teacher from another school
2.	The school gives me the opportunity to connect
3.	Students work mostly in groups
4.	Rude parents
5.	Sharing learning material and practices
6.	Improving community ties

Trust and reciprocity	
1.	My influence at the school
2.	Trusting the leaders at my school
3.	Calgary Board of Education
4.	Communicating
5.	The level of trust at my school

Shared Norms and Values	
1.	School clubs at my school with different norms and values
2.	Accommodating multi-cultural students
3.	Relying on Alberta Education for leading the way in moral values
4.	Moral values at my school
5.	Collaborative reflection together with other teachers about our values

Deep listening	
1.	While paying attention to a parent giving a lengthy explanation of why the school is one of the worst schools he/she has seen, ...
2.	Body language of the other person
3.	It's important to keep in mind that parents and teachers have dramatically different approaches, experiences, styles and sarcasm levels; therefore ...
4.	I like to focus on what the other person is saying because ...
5.	I am the type of person that would rather want to respond than to react to what I've heard because ...

Inversion	
1.	One communicates mindfully when ...
2.	I do/do not participate in mindfulness practices such as yoga and meditation because
3.	I am a person who lives/does not live in the moment, for example ...
4.	Judgementalism is ...
5.	Mindfulness is a way of being ...
6.	I am open to adopt new values and behaviours when ...

Blind spot	
1.	while paying attention to a parent giving a lengthy explanation of why I was not fair in my assessment of the test, I ...
2.	Body language of the other person
3.	It's important to keep in mind that parents and students have dramatically different approaches, experiences, styles and sarcasm levels; therefore ...
4.	I like to focus on what the other person is saying because ...
5.	I am the type of person that would rather want to respond than to react to what I've heard because ...

## APPENDIX 7: LANGUAGE EDITING

**CORRIE GELDENHUYS  
POSBUS 28537  
DANHOF 9310**

☎ **083 2877088**  
☎ **+27 51 4367975**  
**corrieg@mweb.co.za**

28 February 2018

### TO WHOM IT MAY CONCERN

Herewith I, **Cornelia Geldenhuys (ID 521114 0083 088)** declare that I am a qualified, accredited language practitioner and that I have edited the following dissertation for a final time after examination by

by  
**Maria Catharina du Preez**  
(Student number 33098182)

### **MOTION LEADERSHIP TOWARDS SUSTAINABLE DEVELOPMENT IN CANADIAN SECONDARY SCHOOLS IN ALBERTA PROVINCE**



.....  
**C GELDENHUYS**  
**MA (LIN – *cum laude*), MA (Mus), HED, Postgraduate Dipl, Library Science, UTLM**

ACCREDITED MEMBER OF SATI – Membership number: 1001474 (APTrans)  
GEAKKREDITEERDE LID VAN SAVI – Lidmaatskapnommer: 1001474 (APVert)  
Member of/Lid van PEG (The Professional Editors Guild)