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Building Environmental Education Capacity in Classrooms and Schools

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Running head: BUILDING ENVIRONMENTAL EDUCATION CAPACITY

WESTERN UNIVERSITY

Building Environmental Education Capacity in Classrooms and Schools

By

Linda Sue Thomas

AN ORGANIZATIONAL IMPROVEMENT PLAN

SUBMITTED TO THE SCHOOL OF GRADUATE AND POSTDOCTORAL STUDIES

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BUILDING ENVIRONMENTAL EDUCATION CAPACITY

Abstract

There is growing global acknowledgement that our planet is facing an imminent environmental crisis (Kensler, 2012; Kensler & Uline, 2017). Issues such as climate change, loss of biodiversities, water quality, the impact of long term fossil fuel use and single use plastics are compelling countries around the world to calls for action. In the education sector, there is an increasing recognition that raising awareness of environmental issues needs to begin in the schools where students will learn about the impact of individual choices on our environment. Research has shown that environmental education programs in schools have a positive influence on student achievement, while supporting equity, social justice, global citizenship, and ecoliteracy values. In Ontario the number of schools that are choosing to participate in environmental education programs, and practise environmental sustainability, is rising. This paper focuses on one school in a large urban school board in Ontario, and describes the use of mentoring as a tool to support the principal and staff in choosing to embrace environmental education programming in their school. Using a transformational leadership approach in the context of the Cawsey, Descza, & Ingols (2016) Change Path Model and the Burke & Litwin Causal Model of change theory, the mentor will be the change leader throughout the change process, gradually, through modelling and collaborative decision making, releasing leadership responsibility to the principal to sustain and monitor the implementation of environmental education programming in the school.

Keywords: Environmental Education, Sustainability, Mentoring, Transformational Leadership

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Executive Summary

In our world today, environmental concerns have increasingly become a focus of attention and concern (Kensler, 2012; Kensler & Uline, 2017). There are many challenges facing the planet and our population, including climate change, natural disasters, biodiversity loss, fossil fuel use, and single use plastics. These issues are largely influenced by individual choices. Research suggests that meeting these challenges will require a significant shift in our fundamental perspective as an individual to one of understanding that our interdependent relationship with the environment requires a more holistic and global view of responsible citizenship and stewardship. Arguably, the school is the place where this shift in perspective can be nurtured and where school leaders are ideally placed to influence the implementation of a sustainability based environmental education curriculum to support environmental learning for all students. Further research to support environmental learning in schools can be found in the NAEE and Stanford University (2017) report of a Stanford University review of 119 studies that found that environmental education programs for K-12 students enhance students' environmental awareness and positively impact student achievement.

This focus on the student as the means to raising environmental awareness and knowledge is also reflected in The Ontario Ministry of Education (2009) environmental education policy framework, created to support Ontario school boards in developing their own policy framework to support environmental education and responsible practices.

This Organizational Improvement Plan (OIP) and Problem of Practice (PoP) will focus on the environmental education policies in a large urban school board in Ontario, and the implications for schools. While this board has policies in place which are supportive of environmental education and practices, these policies are not overtly reflected in the board's

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improvement plan and vision for student achievement. Additionally, though the board's sustainability department encourages schools to adopt a program reflective of Ontario EcoSchools, the choice to participate in this program is voluntary, resulting in a gap between schools that do and do not incorporate environmental education and sustainable practices into their school curriculum. This PoP raises the question of how to close this gap and increase the number of schools providing environmental education and sustainability learning opportunities for students. This OIP will describe a change plan which will focus on environmental leadership mentoring of individual school principals and school staffs to support them in embracing a change in school vision and in developing a cohesive and meaningful environmental education teaching and learning plan. This OIP will outline a change implementation plan for one school.

Viewing this PoP through Bolman and Deal's (2013) *Structural* and *Political* frames, it is important to note that the views of all stakeholders are heard and incorporated into the change plan. The environmental mentor / change leader will be a model in guiding the principal and staff through the process of examining all variables (e.g. stakeholder input) that will influence change. Using Cawsey, Deszca, and Ingols (2016) *Change Path Model* and incorporating Burke and Litwin's (1996) *Causal Model of Organizational Change*, transformational variables (e.g. external environment, organizational mission and strategy, leadership practices, and culture) and transactional variables (e.g. systems policies and procedures, management practices, organizational climate, and organizational structure) are examined in the first two stages of the Cawsey et al (2016) *Change Path Model*, *Awakening and Mobilization*.

During the first stage, *Awakening*, the rationale for change and a new vision for teaching and learning that incorporates environmental education precepts and strategies will be developed. The leadership approach used in this OIP will be transformational, and as such during the

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Awakening stage, the environmental mentor / change leader must focus on engaging the principal and staff, and motivating and inspire them to embrace the rationale for change, the new vision for change, and the change implementation plan. The environmental mentor / change leader will highlight the environmental research showing that environmental education programs in schools enhance student achievement, and promote values of equity and global citizenship.

One of the strategies the environmental mentor / change leader will employ to support this stage one process is the Professional Learning Community (PLC), a vehicle for allowing the free exchange of ideas and other input. This strategy is conducive to building trust with the change leader and empowering stakeholders in embracing the new vision and change plan. Narrative inquiry is another strategy that will support the flow of experience-based discussion.

During the next two stages of implementation, *Mobilization and Acceleration*, PLCs will continue as a communication plan to keep all stakeholders informed is developed, and monitoring of the change process throughout the transition phase is in place. During this time the environmental monitor / change leader will continue to work with the principal to model and support change leadership strategies, making regular use of PLCs

During the final phase of the Cawsey et al (2016) *Change Path Model*, *Institutionalization*, a formal plan for monitoring, assessing, and communicating the impacts of the ongoing changes must be developed and implemented. At this time, when the change process is solidly in place, the environmental mentor / change leader will gradually release leadership responsibility to the principal so that she may lead the staff in the sustainability of the new environmental education programming.

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I remember so well the day I received my acceptance into this EdD program. I was in an auditorium, part of the audience awaiting a sold-out presentation by Commander Chris Hadfield and I recall thinking that it can't be a coincidence that I am listening to his inspiring and uplifting message of leadership and perseverance on the day I begin my incredible journey with Western University.

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Acronyms

EFS	Education For Sustainability
EQAO	Education Quality and Accountability Office
ESD	Education For Sustainable Development
GADSB	Green Acres District School Board (a pseudonym)
HFPS	Happy Fields Public School (a pseudonym)
OIP	Organizational Improvement Plan
OCT	Ontario College of Teachers
PoP	Problem of Practice
S.M.A.R.T.	Specific, Measurable, Achievable, Relevant, Time-based
UNESCO	United Nations Educational, Scientific, and Cultural Organization
PLC	Professional Learning Community

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Epigraph

Look deep into nature

And then you will understand everything

Albert Einstein (1951)

The world grows smaller and smaller,

More and more interdependent ...

Today more than ever before

Life must be characterised by a sense of

Universal Responsibility,

Not only nation to nation and human to human,

But also human to other forms of life.

His Holiness the XIV Dalai Lama

CHAPTER 1 – INTRODUCTION AND PROBLEM OF PRACTICE

As global environmental issues become increasingly evident throughout the world (Kensler, 2012; Kensler & Uline, 2017), many researchers have turned their attention to the education sector as an area where environmental education and sustainability learning should be taking place. It is important to note that both environmental education and sustainability practices need to be in place in order to implement an effective and complete environmental program in the schools, as environmental education and sustainability are both integral to each other and interdependent (Ontario Ministry of Education, 2009). The Ontario Ministry of Education (2009) cites *Acting Today, Shaping Tomorrow* in defining environmental education as “education about the environment, for the environment, and in the environment that promotes an understanding of, rich and active experiences in, and an appreciation for the dynamic interactions of: the Earth’s physical and biological systems” (Ontario Ministry of Education, 2009, p. 4) as well as social and economic dependency, different factors affecting environmental issues, and both positive and negative impact of society’s choices on the environment. Sustainability, then, is the ongoing application of environmental education to nurture and implement changes in personal behaviour choices with the goal of establishing practices which “minimize our ecological footprint” (Ontario Ministry of Education, 2009, p. 4). Throughout this OIP, the terms environmental education and sustainability are used in the context of these definitions.

In support of environmental education and sustainability programs in schools, NAEF & Stanford University (2017) discuss a Stanford University review of 119 peer reviewed studies assessing the impact of environmental education for K-12 students. They found that environmental education programs positively impact student learning and increase students’ environmental awareness and values. The Ontario Ministry of Education (2009) stated in their

curriculum document *Acting Today, Shaping Tomorrow* that “the government has made a commitment that environmental education as defined in *Shaping Our Schools, Shaping Our Future* (noted above), will be part of every child’s learning and that responsible environmental practices will be fostered across the system” (p. 3). However, while the 2009 document is intended to be a policy framework for environmental education, there is no vehicle in place at the provincial or board level to enforce it, and therefore it is up to each individual school’s discretion whether or not to include environmental learning initiatives in their schools. As a result, a gap now exists between the schools that practise environmental sustainability and those that do not.

The purpose of this organizational improvement plan (OIP) is to examine the factors contributing to this gap between schools in the Green Acres District School Board (GADSB, a pseudonym), specifically in one school, Happy Fields Public School (HFPS, a pseudonym) and to develop a plan at HFPS to address them. Mentoring will be the primary change strategy used in this OIP, and the change leader will be a formally GADSB trained principal mentor, qualified in environmental education programming, and working under the umbrella of the GADSB sustainability department. This central position ensures the agency of the principal mentor across the board.

Organizational Context

The GADSB is a large urban school board in Ontario. It consists of a wide range of diversity of cultures, languages and religions in both students and staff, and many of the students enrolled in the GADSB are born outside of Canada. More than 120 languages are represented by students and families. The socio-economic level of the community is predominantly low to mid middle class.

Green Acres District School Board Pedagogy

The diversity of cultural values, beliefs and languages throughout the board has a significant impact on the board's culture as an organization. Burke (2018) suggests that "change in the culture is in *support* of the changes in mission and strategy; it is the "people" side, the emotional component of organizational change" (p. 23). This concept is clear in the board's newly developed school improvement and effectiveness document which comprises a repeated emphasis on equity, diversity, and inclusiveness in their curriculum statements (GADSB, 2016a). In response to the ongoing evolving demographic changes throughout the board, the lenses of all stakeholders (e.g., board, schools, teachers, school leaders, parent community) need to be broadened to ensure the goals of equity and inclusiveness are met with understanding and compassion. School leaders need to add depth of knowledge, leadership self-awareness, and leadership skills to these expectations.

The focus on equity and inclusiveness is also reflected in the board's mission and value statements which highlight a student first priority and policy, operating within a culture of openness, adaptability and resilience. There is a stated commitment to equity of access and achievement for all students (GADSB, 2016a), emphasizing that all student voices will be heard and that all learning levels and experiences will be recognized. These organizational precepts are reflective of a liberal philosophy which emphasizes this holistic approach to education (Freedman, 2001). For example, Freedman (2001) discusses the liberal philosophy in the context of education, suggesting that the focus is more on the development of individual student identity, critical thinking skills, and values and equity. This is seen in the GADSB Character Education focus (GADSB, 2016a), and the commitment to equity for all students as previously discussed. In addition, a liberal philosophy promotes more parent involvement (Freedman, 2001), and this

is reflected in the the GADSB (2016a) planning document which commits to more parental involvement and influence in system decisions.

Organizational Structure

In contrast, the GADSB's political organizational structure is typically representative of a conservative philosophy, as it is hierarchical, reflecting a top-down approach to management and a more back to basics approach to teaching and learning (Guttek,1997). The GADSB hierarchy is typical of most public boards in Ontario, including a director at the top, supported by a number of associate or assistant senior staff to whom the system superintendents report. The superintendents of schools report to the system superintendents, and school principals report to the superintendents of schools (GADSB, 2016c). Bolman and Deal (2013) compare this organizational structure to a pyramid, with highest management at the top and many managers at the bottom. In a school system, those many managers at the bottom would represent school principals, who report to those managers above them, usually superintendents of schools. Given the dichotomy that exists between the liberal philosophy inherent in the GADSB's teaching and learning focus (GADSB, 2016a), and the conservative, hierarchical organizational structure, the change leader will need to adopt a leadership lens that considers precepts and perspectives from both philosophies.

Burrell and Morgan (1979) suggest that the hierarchical approach reflected in the GADSB structure would fall into the functionalist category of social theory, and within the sociology of regulation with an objective perspective, meaning that the organization would be concerned with accountability and the status quo. Van Tonder (2004) further comments that an organization rooted in functionalism is a "web of ordered relationships" (p.46), is "predictable and controllable" (p.46) and "views people as tools/resources" (p. 46).

An excellent example of the achievement and accountability focus of the conservative philosophy, to which Burrell and Morgan (1979) refer, and to which GADSB is committed (2016a) occurs annually in public elementary school boards in Ontario, when schools are accountable to the board and to the province for their Grade 3 and Grade 6 scores on the provincial Education Quality and Accountability Office (EQAO) annual standardized test. This, together with the board's conservative hierarchical structure, seems at odds with a teaching and learning focus of equity, which implies differentiated instruction to meet the learning needs of all students from all varied backgrounds and learning levels. There is, however, a recently released assessment review published by the Ontario Ministry of Education (2018) which acknowledges the need to "modernize large-scale assessment and reporting" (p. 3), such as the EQAO standardized provincial test. The review found that "there was a strong consensus about the need for changes in EQAO assessments" (p. 3). Notably, the advisors conducting the review found that there was significant concern about the EQAO test in terms of student equity, leading to the recommendation that EQAO should be more inclusive in its design and administration to accommodate cultural diversity and students with special needs. The implication of this recommendation would be that provincial assessment in the province would align significantly more with the GADSB teaching and learning mission and values statements than it does presently.

Complementing the board's hierarchical structure, the board of trustees are elected by the public, represent the school community, approve board policy decisions, and also hire the director of the board. As well, in the GADSB, there exists an arm's length board and advisory committee comprised of a range of roles such as parents, trustees, school and board administrators, sustainability department staff and board partnership organizations. The purpose

of this committee is to examine environmental issues and make policy recommendations to the board. As a GADSB administrator and as an environmental leader, it will be beneficial for the change leader described in this OIP to sit on this committee. Participating in this committee will enhance the change leader's agency and sphere of influence in the implementation of this organizational improvement plan, and provide a means to gather information from a range of conflicting points of view, which will be beneficial in developing a multi-lens perspective with the stakeholders in this OIP, thus ensuring no ethical considerations or conflicts of interest will exist as the views of all stakeholders will be more readily understood. As an initial step in this OIP, the change leader will volunteer to join this committee, which has open invitation.

Happy Fields Public School Demographics

As noted earlier, the school that will be the focus of this OIP is HFPS. It is an average sized school with fewer than 400 students and a staff of more than 30 workers, including teachers and support staff. There is one principal and no vice-principal. The demographics of the school reflect those of the board in that there is high level of diversity of cultures represented in the school, and for many of the students English is not their first language. In addition, there are two special education classes in the school, and students with behavioural needs are minimal.

Leadership Factors

As mentioned previously, the cultural diversity of the community served by the board informs both the board culture and the leadership practices of system leaders and school principals. Because of this, it is important to reflect on the factors inherent in leadership. The dichotomy to which is referred earlier between the board's political structure and their mission statement of inclusiveness and equity is reflected in the work of Burke and Litwin (1992) wherein they differentiate between leadership and management. They suggest that leadership is

associated more with transformational variables such as culture and organizational mission and values, while management's focus is more that of transactional factors, such as organizational structure and system and management practices. In that sense, we can consider systems leaders as managers who address the structural process of the organization, while relying on the organizational resources, such as school leaders, to address the organizational mission and values. This distinction has important implications for the success of this organizational improvement plan, one being that school leaders are shown to be critical in facilitating change in the journey towards sustainability (Buckler & Creech, 2014) because an expectation of their role is "to encourage the development of organizational norms that support openness to change in the direction of the school's vision" (The Institute for Education Leadership, 2013, p. 12). Part of the role as a sustainability mentor will be to nurture and facilitate the move towards a vision change that will incorporate both school and sustainability values.

Another implication to consider is the role of school culture. As the diverse culture of the school community informs the board's and school's value statements and goals, so does it inform leadership practices. Northouse (2016) states that a transformational leader needs to be concerned with "emotions, values, ethics, standards and long-term goals" (p. 161). This statement supports my own self-reflection as a transformational leader who strives to be a leader who "engages with others and creates a connection that raises the level of motivation and morality in both the leader and the follower" (p. 162). These qualities will be especially important in addressing board values and goals in the context of my problem of practice.

As is the case with many boards in Ontario, GADSB was established in 1998, merging with several other boards. At that time, the board worked to meet the challenges of consolidating the mission statements, structures, governance, financial issues and demographic needs of

multiple boards into one new board. Since amalgamation, the GADSB has continually grown and evolved, encompassing a range of diverse cultures. Hence, the board's ever evolving mission and values statement is reflective of the current political focus and cultural composition of the board, emphasizing the board's commitment to equity and inclusiveness to meet the needs of all students from all cultural backgrounds and at all levels of learning needs. This commitment requires school level principals to demonstrate "charismatic and visionary leadership" (Northouse, 2016, p. 161) and to support students and staff in reaching their "full potential" (Northouse, 2016, p. 162). The change leader / principal mentor involved in this OIP will have to possess those same leadership qualities, as well as the ability to view the issues through many lenses.

Leadership Position and Lens Statement

Dweck (2006) talks about the importance of believing in yourself as an important factor in learning, and I would suggest, on reflection, that this is also an important quality in an effective leader. Without a belief in oneself, arguably a leader would find it difficult to convey credibility and inspire trust in followers, and doing so will be key to the success of this organizational improvement plan. Kouzes and Posner (2012) state that effective leadership is all about relationships, and that credibility and trust are key to building relationships. In fact, Kouzes and Posner (2012) conducted a survey to assess the degree to which credibility of the leader determines the attitude of followers. The survey found that “when people perceive their immediate manager to have high credibility, they’re significantly more likely to feel proud about their organization ... and be motivated by shared values and intrinsic factors” (p. 38). Kouzes and Posner (2012) conclude that “the data confirms that credibility is the foundation of leadership” (p. 39).

Noting the conclusions of Kouzes and Posner (2012) that intrinsic motivators are factors in the perception of leadership credibility, a review of the work of Northouse (2016) cites the work of Bass and Riggio (2006) and their emphasis on the intrinsic motivation factor of transformational leadership. Northouse (2016) further describes transformational leadership as being concerned with “emotions, values, ethics, standards, and long-term goals” (p. 161). Since the focus of transformational leadership is inspiring and motivating followers to make intrinsic changes, I conclude that my leadership philosophy and approach fall most appropriately within the transformational criteria. Northouse (2016) notes that a transformational leader is “attentive to the need of others, motivates followers, and tries to help followers reach their full potential”

(p. 162). These characteristics are fundamental to the leadership philosophy and approach that will be used in this OIP.

Leadership values are critical to informing this OIP's leadership lens approach, and also influencing the way the lenses of the stakeholders are perceived in this OIP. Since, "so many of our schools today are not deeply connected to, or informed by, society's current local and global needs" (Kensler & Uline, 2017, p. 23), this organizational improvement plan will address the issue of inconsistency in the adopting of environmental education and sustainability practices in schools. Hence, it can be construed that this leadership lens comprises liberal precepts such as a holistic and values-based philosophy (Freedman, 2001) conducive to improved student achievement. However, this lens might also include an indigenous and/or religious focus since in both contexts the environment is central to learning and quality of life (Simpson, 2002; Kaza, 2012). In any of these cases, this lens would be in contrast to that of the organization which, with its focus on provincial test scores as the primary indicator of student achievement (GADSB, 2016a), is more representative of conservative precepts (Guteck, 1997).

In reflecting on the perceived differences between the leadership lens for this OIP and that of the organization, the best leadership approach to further the goals of this OIP needs to be determined. Burrell and Morgan (1979) outline the paradigms in which the leadership philosophy of this OIP, and that of the board, are entrenched. The authors note four paradigms in which they state all theories can be grounded: (a) radical humanist, (b) radical structuralist, (c) interpretive, and (d) functionalist. Considering the board as a structured organization grounded in hierarchy and empirical accountability, and where change is "rational and purposeful" (Van Tonder, 2004, p. 46), arguably the assumptions of the functionalist paradigm best reflect the organizational perspective. Further, in examining Bolman and Deal's (2013) four frames

approach to organizational theory, the structural frame fits well within the functionalist paradigm, as organizations viewed through this lens are perceived as hierarchical and rules based.

In considering all of the above factors, as well as the research on leadership and organizational theory (Bolman & Deal, 2013; Kouzes & Posner, 2012; Northouse, 2016), it is concluded that the transformational approach to change leadership, in addition to the multi-focused leadership lens of the change leader, fits appropriately within the functionalist paradigm and the structural framework of the GADSB organization, as this leadership approach to, and vision of change, are planned and purposeful (Burke & Litwin, 1992), and measurable. This leadership approach can also be considered as linear since, while collaboration and individual initiative are valued as inherent in this leadership philosophy, these values also function within a hierarchical organization.

In the context of this OIP, this duality (i.e., the contrast in using a values-based, collaborative approach in a structured organizational framework) can be viewed as both a leadership challenge and an opportunity to understand and consider the lenses of all the stakeholders involved in this OIP. Recognizing that the lens reflects of the change leader reflects an environmental bias and as such is rooted in both philosophical and values-based precepts (Kensler & Uline, 2017), understanding the perspectives of others will be necessary to informing the strategies that will be planned and implemented in the role as change leader and principal environmental mentor.

Based on the writings of Northouse (2016), the conclusion is that the leadership strategies employed in this OIP reflect a transformational approach. Many years of experience as a principal has shown that empowering and nurturing others are essential factors in working

through the change process, and as the change agent leads staff and students in working towards a goal of environmental sustainability, it will be necessary to “raise the consciousness in individuals and to get them to transcend their own self-interests for the sake of others” (Northouse, 2016, p. 175). The initial focus as a transformational leader, and principal mentor, will be to build trust and credibility, to inspire and motivate followers, and to nurture leadership in others. The leadership lens comprises tenets from multiple philosophies while remaining grounded in the functionalist paradigm, fitting well within the structure and hierarchy of the organization. The success of this work as a change leader and mentor to other principals in motivating and nurturing their willingness to adopt environmental education and sustainability practices in their schools, will entirely depend on the effectiveness and approach as a leader in environmental education. To support the leadership strategies in this OIP, the work of Kouzes and Posner (2012) emphasize the importance of understanding the shared values of followers, suggesting that, though credible leaders appreciate the diversity of their followers’ perspectives, they are also looking for, and stress, their common values. Kouzes and Posner (2012) state that “leaders build on agreement. They don’t try to get everyone to be in accord on everything” (p. 57). Lumby and Foskett (2011) suggest that a leader needs to gain an understanding of the group culture in order to develop an understanding of the “commonalities that are a satisfactory basis for generalization” (p. 452). It will be essential for the change leader / mentor to gain an understanding of the culture of the target groups (i.e., school principal, staff, and later community members) in order to establish the credibility and trust which are the building blocks of leadership success (Kouzes & Posner, 2012).

Leadership Problem of Practice

As previously stated, in our world today, environmental issues have increasingly become a focus of attention and concern (Kensler and Uline, 2017). There are many challenges facing the planet and our population, including climate change, natural disasters, biodiversity loss, fossil fuel use, and single use plastics (Furman & Gruenwald, 2004). These issues are largely influenced by individual choices. Kensler and Uline (2017) suggest that to meet these challenges requires a significant shift “in our fundamental worldview from one that sees humankind as separate from and conquerors of nature, to one that sees humankind as integral with and dependent upon nature” (p. 6). Kensler and Uline (2017) further suggest that school is the place where this shift in worldview can be nurtured and that school leaders are ideally placed to influence the implementation of “sustainability-relevant curriculum” (p. 7) and to develop capacity for teaching and learning to instill values of global citizenship and responsible sustainability practices.

However, while research supports the importance of the role of schools and school leaders in the movement towards environmental sustainability (Bowers, 2010; Kensler, 2012; McClam & Diefenbacher, 2015), organizational environmental data (GADSB, 2016c) clearly shows that not all schools and school leaders are engaged in an environmental sustainability focus. Hence, the purpose of this Organizational Improvement Plan (OIP) is to examine the current environmental education and sustainability practices among schools in a large urban school board in Ontario, the factors which are influencing board and school current practice, and the development of strategies to address the gap between current practice and the desired state in a specific school (i.e. HFPS). This will involve deep reflection of personal leadership change

theory and leadership philosophy and a thorough understanding of the Green Acres District School Board's organizational context, as well as the organizational variables at HFPS in order to develop a more complete awareness of the lenses and perspectives of all organizational and community stake holders.

Framing the Problem of Practice

The underpinnings of this problem of practice (PoP) are deeply embedded in environmental sustainability ethics and practices, as well as global responsibility and citizenship. In considering the most effective framework for this PoP, careful research and analysis of current organizational framework literature are needed. On the surface the precepts embedded in this PoP seem at odds with the hierarchical structure prevalent in the GADSB, so in order to embrace this challenge, the selection of the organizational framework is critical to the development of this OIP. Bolman and Deal's (2013) four frames approach to organizational reframing allows the use of each of their four frames as a new lens through which to view the board and school organization, providing a new understanding of the dimensions of hierarchy, layers of management, decision-making, and the perspectives of other stakeholders inherent in the organization, particularly in the context of this problem of practice.

Bolman and Deal's Four Frames

Bolman and Deal's (2013) four frames comprise the structural frame, the human resources frame, the political frame, and the symbolic frame. The essential concepts of each frame are outlined as follows: (a) the structural frame focuses on "rules, goals, policies, technology, and environment" (p. 19); (b) the human resources frame discusses "needs, skills, and relationships" (p. 19); (c) the political frame is concerned with "power, conflict, competition,

and politics” (p. 19), and lastly (d) the symbolic frame is based on “culture, meaning, metaphor, ritual, ceremony, stories, heroes” (p. 19). Viewing the GADSB organization through these different lenses, while considering the essence of this ethics-based PoP, as well as the structural nature of the organization, this PoP arguably fits best within the structural framework, although components of other frames, for example the political frame, would apply.

The structural frame. Looking first at the assumptions of the structural frame, it is clear that this frame’s focus is on a hierarchy of authority, rules, policies, and emphasizes the achievement of defined goals and objectives. Bolman and Deal (2013) suggest that the structural frame is the most traditional and typical lens through which to view organizations, as a pyramid shape, as previously noted, with “a small number of bosses at the top and a much larger number of employees at the bottom” (p. 41). However, Bolman and Deal (2013) go on to suggest that this frame “goes much deeper to develop versatile and powerful ways to understand social architecture and its consequences” (p. 41). It is for this reason that this PoP fits well within the structural frame. The pyramid metaphor of organizational structure well describes the Green Acres District School Board (GADSB). However, a school board differs significantly from other corporations in that there are many sub groups (schools) under middle management (principals), and principals have some autonomy as to the strategies they use to implement the board’s mandates. That is the area where some aspects of the political frame might appear. The following section outlines the scope and limitations of both frames to inform the overall framework through which to view this PoP.

There are six assumptions of the structural frame (Bolman & Deal, 2013). The first is that “organizations exist to achieve established goals and objectives” (p. 45). As previously mentioned, GADSB (2016a) has specifically stated goals and objectives which do not include

addressing environmental education and sustainability. However, as a principal mentor in environmental sustainability, the change agent will have a differentiated set of goals and objectives, which, while they must fit within the parameters of the board's guidelines, will be based on the tenets and values of environmental education. Bolman and Deal (2013) suggest that leaders who make change using the structural approach focus on structural elements within the organization as well as strategy, implementation and adaptation. In addition, changing institutional structures works well when goals are clear, when cause-and-effect relationships are well understood, and when there is little conflict, uncertainty or ambiguity. Based on this view, it can be argued that incorporating environmental education into the current organizational structure would enhance achievement goals, not deter them. Ardoin, Bowers, Roth and Holthuis (2016) reviewed a Stanford University study that found environmental education is conducive to knowledge and achievement gains across many areas of the curriculum, including literacy, numeracy, science, mathematics, social studies, and the arts.

In terms of working within the hierarchical parameters of the structural frame, the Ontario Ministry of Education (2009) states that "school boards will encourage environmental learning for all students inside and outside the classroom (p. 15). Additionally, the document notes that "environmental education not only expands students' knowledge of the environment, it also enhances critical thinking and problem solving skills" (Ontario Ministry of Education, 2009, p. 10). In terms of aligning with the board's stated goals and objectives, both the ministry goals and that of this PoP are aligned in the expectations that all students will be engaged in learning environments and experiences which enable critical thinking and problem solving.

The political frame. Looking at the political frame's first assumption "organizations are coalitions of different individuals and interest groups" (Bolman & Deal, 2013, p. 188), this lens

would definitely need to be incorporated into the structural perspective. Arguably, an educational organization is a very political entity, and therefore there is a range of groups exerting influence over daily and long term decision making. Fortunately, among these are environmental interest and advocacy groups, but also various other advocacy groups, as well as back-to-basics pressures. Bolman and Deal (2013) also note as their second political frame assumption that all of these coalition members “have enduring differences in values, beliefs, information, interests, and perceptions of reality” (p. 188), and these differences form the basis for competition for political influence.

There are also significant differences in both the structural and political frames (Bolman & Deal, 2013) which do not fit this PoP, leadership philosophy and lens. For instance, one of the assumptions of the structural frame is that leadership is viewed “as a social architecture” (p. 19), while, in contrast, the leadership focus in this OIP is individual, transformational, motivational and relationship-based. As well, the focus in the structural frame is to move the whole group towards an arbitrarily set goal for common organizational behaviours, while the leadership approach in this OIP is nurturing and empowering of individual, rather than group, initiative and motivation.

One of the central assumptions of the political frame is that leadership is about “power, conflict, competition and politics (Bolman & Deal, 2013, p. 19). This assumption is in direct contrast to the leadership focus and approach in this OIP, that the purpose of leadership is not about using power, but a means of developing and inspiring leadership as followers.

The human resources frame. The assumptions of the human resources frame are based on the premise that the organization exists to serve the workers, not the workers exist to serve the organization and also that there is a symbiotic relationship between the needs of workers and the

organization (Bolman & Deal, 2013). The organization needs workers and the workers need to be paid by the organization. The right relationship between workers and the organization is conducive to a productive workplace. In the context of the human resources frame, the change leader acts more as a catalyst in a somewhat servant relationship to the followers (Bolman & Deal, 2013), which does not quite fit with the transformational leadership approach used in this OIP, where the goal is to inspire followers to reach their potential in meeting the organizational change goals (Northouse, 2016).

The symbolic frame. This frame focuses more on the process than the result, and there is a general sense of “uncertainty and ambiguity” (Bolman & Deal, 2013, p. 248). Culture is highly significant to this frame, and followers seek symbols to define and give meaning to the work (Bolman & Deal, 2013). In contrast to the structural frame, for instance, the symbolic frame is very non-linear, whereas this OIP comprises a linear process to achieve the newly and collaboratively created vision and goals.

Conclusion. Considering all the factors and assumptions of all the four frames, it can be concluded that the structural frame, with the inclusion of some aspects of the political frame are the most realistic and feasible frameworks for this PoP. As Bolman and Deal (2013) state “multiframe thinking requires moving beyond narrow, mechanical approaches for understanding” (p. 18). In order to successfully implement this OIP, it will be necessary to embrace this multiframe thinking and approach.

Additionally, there are varying micro, meso, and macro factors which help shape the problem of practice. In terms of meso factors, the GADSB is a structural hierarchy embedded in the functionalist paradigm where change is “rational and purposeful” (Van Tonder, 2004, p. 46). The board has a conservative approach to administration, goals and objectives. The primary

focus is on student achievement measured in the context of provincial standardized test scores, and core curriculum subjects. As well, the board does not reflect environmental policies (GADSB, 2016b) in their board improvement documents (GADSB, 2016a).

The meso factors evolve around middle management (e.g., principals) who have some autonomy in their choices of strategies to address board student achievement expectations. This autonomy is exacerbated by the fact that many principals believe that environmental education, since it is not mandated, is not a valued practice or priority of the board.

The micro factors rest primarily with the change leader. As an environmental principal mentor, the change leader will need to understand both her own leadership lens and the lenses through which other principals and the board view the issue. Having established that this PoP is framed from both structural and political perspectives, the transformational leader needs to incorporate those perspectives in order to clearly understand and address the approaches of both mentees and followers (e.g., the principal and staff of HFPS).

Considering the macro and meso factors mentioned above, it is concluded that the meso factors will be of the greatest influence. As previously noted, principals as middle managers have the option to embrace environmental education and sustainability practices at their discretion. This will be the largest factor to consider. The mitigation of this factor will be very dependent on the micro factor (i.e., the change leader's ability to understand the lens through which others are viewing the issue), and to successfully apply a leadership lens and approach that will effectively engage the principal and staff of HFPS in a willingness to embrace transformational changes in their school. A great deal of the success of this OIP is dependent on the initial process to select the mentee school as discussed in the following section.

Guiding Questions Emerging from the Problem of Practice

Several questions have become apparent through the development of this PoP and OIP. The most presenting question is how will schools be chosen to participate in the mentoring partnership. Belle (2016) suggests that “participation in organizations must be intentional, experiential and motivational” (p. 333), so given those criteria, it will be more conducive to mentoring success if schools were given the option to volunteer to participate.

However, the question then becomes what would be the criteria for a school to volunteer. It would seem likely that the assessment tool for change readiness developed by Cawsey et al. (2016) would be an appropriate beginning point, the criterion being that the schools with the highest scores would represent the highest chance for change success if selected.

Again, this question leads to another one – should the goal be to work with just willing and ready schools? If they were willing and ready, would they not already be implementing environmental education programs, or do they just require mentoring and guidance to begin the process? Should this OIP use the GADSB’s quantitative data (GADSB, 2016c) which publicly reports individual school’s energy use as a measure to focus on schools that are resistant to embracing environmental education practices in their schools? These questions can perhaps be answered by looking at the reason the mentoring strategy will be in place. As mentioned in a previous section, while there are policy documents in place, there is no board or ministry mandate for schools to adopt an environmentally sustainable ethic, and thus no obligation by any school to engage in environmental education programs. While one option is to embrace the challenge of changing the mindset of a resistant principal, it could be argued that if the goal is to increase the number of sustainable schools in the GADSB, then it would seem more beneficial to

the environmental mentoring strategy to initially support schools who are willing but need guidance and support. Happy Fields Public School (HFPS) is a school that had previously expressed an interest environmental education but lacked the knowledge and skills to put such a program into action. HFPS will be tentatively selected as the school focus for this OIP, subject to determination of change readiness which will be discussed in the final section of this chapter.

The potential challenges of this OIP are closely related to these questions. It may be that the principal is willing to become involved in environmental mentoring, but the staff may be resistant. This will involve a greater challenge in mentoring the principal in the use of strategies to engage teachers. Kouzes and Posner (2012) state:

because innovation and change involve *experimenting and taking risks*, your major contribution [as a leader] will be to create a climate for experimentation in which there is recognition of good ideas, support of those ideas, and the willingness to challenge the system” (p. 20).

Bringing resistant teachers on board requires a lot of recognition, encouragement, validating of new ideas, and empowerment, not to mention perseverance.

Another issue that was a potential challenge in the initial development stages of this OIP was the question of agency. As a school level principal, the sphere of influence and agency to effect change would be limited. However, as a principal who is also a provincially trained mentor as well as an environmental education specialist reporting to the sustainability department, the sphere of influence is moved from the school level to the system level and hence agency to implement change is no longer in question.

After a careful review of the questions and challenges raised in this section, it is apparent that the change leader / mentor must have a clearly conceived vision for the change process to be undertaken in this OIP.

Leadership-Focused Vision for Change

In order to create a new vision for change, a process needs to be put in place to examine where the organization is now currently, and where they want to be. This section will discuss how to identify that gap, the priorities for the new change vision, and the factors that will drive the proposed change.

Gap Between Current and Desired Organizational State

Currently, as previously stated, the Green Acres District School Board has policies in place which are supportive of environmental education and practices (GADSB, 2016b). However, these policies are not overtly reflected in the board's improvement plan and vision for student achievement and well-being (GADSB, 2016a). The board's sustainability department embraces an environmental practices system reflective of Ontario EcoSchools (2017) which offers an optional environmental certification program for schools that wish to participate in environmental education and sustainability practices. However, since the program is voluntary, it is at each school's discretion whether or not to engage in this certification program. Because of this individual school-based autonomy to choose, a considerable gap has been created across the board between those schools choosing to adopt and implement environmental education practices, and those that do not. The situation is exacerbated by the fact that, while the board supports environmental practices, these practices are not mandated for schools. This dichotomy of sustainability implementation sends a mixed message to the schools and principals, as many principals may interpret this ability to choose as reflective of perceived board apathy to the need

for, and role of, environmental education programs in an effective and global learning program. In the role of environmental education specialist and principal mentor, this perception of board indifference to environmental sustainability programs in schools has been observed throughout many discussions with principals, both local and system wide. A principal's choice not to embrace environmental education programs in his / her school creates and expands the gap in the implementation of sustainability practices throughout the board.

The goal for this organizational improvement plan is to address this gap through initiating an environmental mentoring process in individual schools. HFPS is the school chosen as the focus of this OIP, and the role of the principal mentor and change leader is to develop strategies to not only nurture a sustainability ethic in the school principal and staff, but also to demonstrate how environmental education can integrate with existing provincial curriculum and ministry policy documents. In addition, the environmental mentor and change leader must help the HFPS principal understand how environmental education programs can support the board's focus on student achievement, well-being and equitable inclusion (GADSB, 2016a), thereby benefitting all organizational stakeholders.

The Ministry of Education (2007) states:

Schools have a vital role to play in preparing our young people to take their place as informed, engaged, and empowered citizens who will be pivotal in shaping the future of our communities, our province, our country, and our global environment. (p. 1)

The Ontario Ministry of Education (2009) expands on this point emphasizing that "environmental education is a shared responsibility and that all of us have roles to play as learners, teachers, leaders, and community members" (p. 9). This document is a comprehensive

toolkit of expected actions on the part of all education stakeholders, as well as effective strategies and available resources to support implementation of the expectations. However, this document as a policy framework is not reflected overtly in the Ontario Ministry of Education's curriculum documents. For example, one of the goals in the Ontario Ministry of Education's (2007) science and technology curriculum is to "relate science and technology to society and the environment" (p. 2), and indeed one of the six fundamental concepts on which the document is based is "sustainability and stewardship" (p. 5). However, these fundamental concepts are described in the document as "key ideas that provide a framework for the acquisition of all scientific and technological knowledge" (p. 5). The problem with this framework is that it addresses only basic level cognitive skills such as knowledge, comprehension and application of knowledge as described in Bloom's Taxonomy of Educational Objectives (Verenna, Noble, Pearson, & Miller, 2018). This is important to note as the higher order, or more complex cognitive skills such as analysis (making inferences and finding evidence to support conclusions), synthesis, and finally evaluation are not part of the Ontario Ministry of Education's (2007) science and technology curriculum. Rather, the criteria for assessment of knowledge and skills in the curriculum document are noted as knowledge and understanding, thinking and investigation, communication, and application. As an essential component of this OIP, the higher order thinking skills mentioned above as part of Bloom's Taxonomy (Verenna, Noble, Pearson, & Miller, 2018) will be addressed through not only a comprehensive environmental education program, but also the implementation of sustainable practices as defined earlier in this chapter. These sustainable practices will consolidate and implement environmental learning and provide the means and necessity for students to analyse, synthesize, and evaluate their learnings in the context of practicing sustainability.

While ministry curriculum documents do not address environmental education issues beyond knowledge, understanding and application of knowledge, and board policy documents do not mandate the inclusion and practice of environmental education programs in schools, there is extensive research to support individual principals' decisions if they choose to do so. Stern, Powell and Hill (2014) note that recent peer-reviewed literature supports the findings that environmental education programs have a positive impact on students' academic achievement. In addition, Stanford University presents an analysis of 119 peer reviewed studies that assess the impacts of environmental education for K – 12 students (NAEE & Stanford University, 2015). They found that environmental education is an opportunity for transformative learning experiences and instills in students a passion for learning.

Priorities for Change

In 2004, as an action to respond to the ever increasing global environmental crisis, and the depletion of the world's natural resources, the United Nations proclaimed that the years 2005-2014 would be the *Decade for Sustainable Development* (UNESCO, 2004), and sustainable precepts should be incorporated into all aspects of education. The goal for this initiative was to bring about behaviour changes necessary to preserve our environmental integrity for now and future generations. As mentioned previously, Kensler and Uline (2017) advocate that schools are the places where this shift in behavior changes needs to begin. As there is no law, government or board policy, or curriculum mandate in Ontario to implement environmental education and sustainability practices, the challenge of this OIP is to influence principals and teachers in schools to adopt these initiatives.

Through many mentoring discussions in a range of schools, it has become apparent that in most schools, especially if there are resistant staff and/or leadership, it is important to discuss

the rationale for environmental education and strategies simultaneously. Many teachers recognize the value of sustainable practices, even though they may not practise environmental awareness in their schools, and are eager to know how they would implement environmental learning opportunities in their classrooms. Other teachers may maintain that environmental education takes away from teaching core curriculum subjects such as mathematics and language, and hence, student achievement.

Rationale for Environmental Education. In response to the perception described in the previous paragraph, Kensler and Uline (2017) state that “practicing a sustainable ethic is not an add-on; it’s a new lens through which to consider all decisions” (p. 39). The message to convey to staff is that learning through the environment encompasses all aspects of the curriculum and enhances student engagement and motivation for learning. Ardoin, Bowers, Roth and Holthuis (2016) state that “there is a mountain of evidence that suggests EE is a powerful way to teach students. Over 100 studies found that it provides transformative learning opportunities” (p. 1). More insight into the rationale for environmental education and sustainability, and in particular the strategies to pursue it, can be found in the work of McClam and Diefenbacher (2015). They argue that, as already established in the preceding section, textbook knowledge does not necessarily translate into environmental action, and thus have created tools to support classroom teaching and practice of environmental sustainability.

Another significant rationale for engaging in environmental sustainability practices must not be overlooked. In a board such as the GADSB, where there exists a wide range of cultural diversity and learning needs, equity and inclusion are high priorities (GADSB, 2016a). Schneller (2008) reviewed the issue of equity in the context of environmental education and concluded that

students of all levels of abilities, learning needs, and cultural backgrounds can access, and learn through, environmental education initiatives.

An additional issue of high priority is that of social justice (GADSB, 2016a). Furman and Gruenwald (2004) studied the link between social justice, ecology, and sustainability and developed the concept of socioecological justice, and found that environmental crises and social crises are interrelated. They conclude that their research shows the importance of socioecological justice as a tool to both support student achievement, and to address the social and ecological issues currently evident in our environment.

Having established the priorities for change as implementing an environmental education program which will: (a) enrich and support existing curriculum conducive to increasing student achievement; (b) provide equitable access to learning opportunities for all, and (c) promote the tenets of social justice and global citizenship, the next section will focus on the means to achieve these priorities.

Change Drivers

The Burke and Litwin (1992) *Causal Model of Change Theory* will be the change theory adopted in this OIP as it is linear, planned and purposeful (Van Tonder, 2004), and aligns well to the hierarchical, linear structure of the organization. This model is also measurable in that it considers and addresses the causal variables influencing change with measurable results. The Burke and Litwin (1992) *Causal Model of Change Theory* is derivative of the Pascal and Athos (1981) *7S Model* which notes seven dimensions of change; however, the Burke and Litwin (1992) *Causal Model* goes further in researching how the variables affecting change are influenced by the external environment (e.g., transactional factors such as organizational climate, structure, system and management practices) and the internal environment (e.g., transformational

factors such as leadership, organizational culture, and organizational mission and strategy). Change in this model occurs with particular emphasis on transformational factors (e.g., leadership) as compared with transactional factors, although both must be present (Burke & Litwin, 1992) to support successful change implementation.

The Burke and Litwin (1991) *Causal Model* focus on leadership as an essential component influencing the success of the change process is also supported by research in the context of environmental education. Kensler (2012) discusses the importance of the school leadership component in the organizational journey to environmental sustainability, stating that “leadership of the process of becoming a sustainable school is relational, empowering and connecting. It plays out at the interface between personal authority and democratic, distributive processes” (p. 791). Kensler’s (2012) focus on change as a movement from bureaucracy to democracy aligns well with Burke and Litwin’s (1992) distinction of transactional process as those pertaining to management, and transformational processes as those pertaining to leadership, although Burke and Litwin (1992) contend that both transactional and transformational processes need to be present to successfully drive organizational change.

Burke and Litwin (1992) suggest that in order to plan and assess change it is necessary to understand how the organization functions, and how change might occur (i.e. how the variables influence and drive change). The tools to assess these at the macro level are readily available. The GADSB sustainability department publishes publicly accessible quantitative data reflecting the annual energy consumption statistics for each school (GADSB, 2016c. This data provides information in the context of one area (i.e., energy consumption) of sustainability levels at each school. Data can be compared to other years so that schools in need of possible sustainability

support can be more easily identified. This data may also help to inform the change readiness status for prospective mentee schools.

Organizational Change Readiness

Change readiness, at both the organizational level and the school level, will be a pivotal factor in the successful implementation of this OIP. It is ironic that the GADSB policies in place supporting environmental education and sustainability, but not mandating it for schools, actually make the challenge of change readiness at the school level more difficult. As schools are free to choose whether or not to adopt environmental education and sustainability programs, the focus of the principal mentor and change leader will be on schools who have not embraced environmental practices, and where each of those schools is on the continuum of change readiness greatly influences the selection of schools. The challenge is to identify schools where the principal and staff are likely to be receptive to the environmental education principal mentoring process, and where the school readiness level is conducive to the successful implementation of this OIP. Thus, assessment of change readiness will be critical.

Cawsey, Deszca and Ingols (2016) suggest that in order to gain a sense of change readiness, change leaders should examine the external organizational environment to determine a need for change. This would include any outside condition or situation that can impact the organization. To that end, another tool that will be employed to establish a sense of the organizational current state will be a PESTE Analysis (Cawsey et al., 2016) which describes five factors which influence the need for change: (a) political; (b) economic; (c) social; (d) technological, and (e) ecological / environmental. Burke and Litwin (1992) would describe these external environmental factors as transactional. However, Cawsey et al. (2016) also suggest that change leaders strive to understand the perspectives or lenses of the stakeholders involved in

order to develop a sense of awareness of the current state of the organization and determine a need for change. The PESTE Analysis (Cawsey et al., 2016) will provide a useful framework within which to review all variables (i.e., transformational and transactional) in order to understand how they drive change (Burke & Litwin, 1992).

Cawsey et al. (2016) have developed a tool for assessing change readiness called *Rate the Organization's Readiness for Change*. It allows the opportunity to rate the organization's change readiness across six dimensions: previous change experiences, executive support, credible leadership and change champions, openness to change, rewards for change, and measures for change and accountability. For each question under those six categories, a score of +2, +1 or -1. The higher the score, the more receptive an organization is to considering change. A score below 10 would indicate that an organization is not ready for change. It is also interesting that the category executive support has 10 questions assigned to it, suggesting perhaps that there are more variables to consider in this category and that system leader support may be a critical aspect of change readiness and change success. The role of executive support as a variable is of particular relevance in my OIP, as my mentorship to individual schools can be considered as direct organizational support. As well, this tool for addressing change readiness will be used to assess individual schools' change readiness, not the GADSB as a whole.

Gigliotti, Vardaman, Marshall and Gonzalez (2018) also researched the role of organizational support in change readiness. They found that when employees felt valued by employers, and that employers prioritized the employees' well-being, employees' attitudes to change were more positive. Armenakis, Harris and Mossholder (1993) also discuss the importance of examining stakeholders' beliefs, attitudes and intentions as factors in change readiness. They found that two cognitive components, the belief that change is needed and the

belief that the organization has the ability to change had to be in place for employees to be receptive to change.

These findings that show transformational factors such as attitudes and beliefs (Burke & Litwin, (1992) are key components of change and reinforce the importance of the role of leadership in the change process. In the first section of this OIP, the importance of leadership credibility was discussed. This is supported by Cawsey et al. (2016) who state that “the change agent’s credibility is crucial” (p. 116). As well, Kouzes and Posner (2012) conducted a survey which found that “credibility is the foundation of leadership” (p. 39). Once the change readiness level is determined at the school level, the mentor / change leader’s next challenge will be to work to foster trust and collaboration, and develop a shared vision with the principal and the school staff (Northhouse, 2016) as the change implementation process begins.

Competing Internal and External Forces Shaping Change

There are many organizational factors (e.g., culture, history, structure, equity and political) which influence and determine the path of change. In terms of culture, Lumby (2012) suggests that organizational culture can be defined as “the net effect of visible and invisible rules that shape the choice options for thought and action” (p. 579). It will be important to gain an understanding of the culture of the school before the initial meeting with the principal and staff. Part of that can be achieved by researching the history of the school, but the invisible culture will not become evident until interaction with school leaders and followers begins. Connolly, James & Beales, (2011), suggest that culture is a “key contingency which organizations can and must get right if they are to succeed” (p. 426). Therefore, the challenge for the principal mentor / change leader will be to lead and influence followers in changing the school culture to meet new environmental education and sustainability objectives.

History is another important factor shaping change. It could be argued that history is the most important factor in the evolution of the culture of the school, since years of historical practice have led to the current cultural perspectives in each school. Burke (2018) speaks about viewing organizational history in terms of “what happened, what changed, what remained the same ...” (p. 687), and it would be important to understand the school history in order to make informed change leadership approach decisions. Burke (2018) asks two pivotal questions to rationalize the importance of organizational history: (a) what can it tell us about how change occurs, and (b) how can it be sustained? Pursuing a change plan without answering the first question precludes the second. Understanding the organizational history helps to inform a successful change plan.

Organizational structure is another critical factor influencing a potential change plan. Bolman and Deal (2013) state that “at any given moment, an organization’s structure represents the best effort to align internal activities to outside pressures and opportunities” (p. 93), a statement that well reflects the organizational structure of the GADSB. However, Bentley (2009) points out the potential difference that can exist between school and organizational structure, noting that while organizations impose boundaries and limitations, at the school level teachers and administrators can often adapt these limitations into the school structure. However, it would be more conducive to a successful change plan if the principal were to use a change model that aligns with the organizational structure and paradigm, thus creating a smoother change path with potentially fewer barriers.

Finally, Jones and Harris (2014) note that one barrier to building capacity throughout the change process may be that followers are not ready to learn and work collaboratively, and suggest the role of the principal is pivotal in facilitating a group process. As an experienced principal, this has been found to be consistently true, highlighting the importance of the change leader’s / mentor’s skills in building trust to inspire and motivate followers. Northouse (2016) notes that doing so is an important function of transformational leadership, suggesting that “followers want to emulate transformational leaders because they learn to trust them and believe in the ideas for which they stand” (p. 176). The effective transformational leader’s initial focus will be on building trust and credibility, the building blocks of positive relationships and effective teams (Kouzes & Posner, 2012). As a transformational leader, the change agent / mentor will continue to build capacity in collaboration skills as it essential to the success of the mentoring process that we work collaboratively as a positive, effective team.

Chapter Summary

This chapter discusses the organizational context of the Green Acres District School Board (GADSB), a large urban, multicultural, public school board in Ontario, and Happy Fields Public School, an average sized public school which currently does not participate in environmental education practices and has been selected as the focus for the purpose of this OIP. The problem that will be addressed is the gap existing between schools that choose to practice environmental sustainability and those that do not, through involving individual schools in a principal environmental mentoring process. It is established that the framework for this OIP will be structural, using a transformational leadership lens. The change model that will be adopted for this OIP is the Burke and Litwin (1992) *Causal Model of Change Theory*.

CHAPTER 2 – PLANNING AND DEVELOPMENT

Leadership Approach(es) to Change

There is considerable research to support the importance of the role of leadership in effecting change (Bass & Steidlmeier, 1999; Higgs & Rowland, 2007; Kouzes & Posner, 2012; Northouse, 2016). Leadership can be described as a process whereby an individual influences a group of followers in pursuing and achieving a common goal for change (Northouse, 2016), a process involving adapting leadership behaviour in response to changing situations (Yukl & Mahsud, 2010), or a process by which leaders mobilize others to adopt a shared vision (Kouzes & Posner, 2012). Given the range of leadership theories represented in current research, in order to successfully negotiate the change process, the selection of an appropriate leadership approach, or approaches, is essential. As the changes at GADSB will require each school leader and his or her followers to not only understand the need for change but also to embrace the change process, a leadership approach that values and encourages individual reflection and initiative is essential.

One leadership approach that meets this criterion of individual empowerment is transformational leadership (Bass, 1995; Northouse, 2016). As outlined in Chapter 1, transformational leadership is the suggested approach that will be used to address the problem of practice in this OIP. The concept of transformational leadership was originally identified in the early 1970's by Downton (1973) and later further developed by Burns (1978) and researchers such as Bass, (1985, 1996), & Bennis & Nanus (1985). The transformational leadership approach has been shown to demonstrate a positive correlation between leaders' and followers' behaviours in that a leader's facilitating and empowering behaviour results in a greater possibility of building capacity and increased motivation in followers (Higgs & Rowland, 2007; Bush, 2018). The focus of transformational leadership is on the leader's ability to inspire followers to adopt

behaviours and internalize beliefs conducive to realizing the change vision of the organization and leader (Bush, 2018). This is not accomplished through a reward-for-performance transactional process; neither is it a top-down progression whereby leaders set goals, assess performance, and acknowledge follower's efforts. Instead, followers are inspired to do more than expected and become informal inspirational leaders themselves (McCall, 1986). Bass (1985) suggests that a transformational leader needs to be able to develop a sense of followers' needs, values and beliefs, and that leadership behaviour needs to be follower-focused, motivating them to act on their own initiatives to achieve the change goals.

The success of transformational leadership is measured by the leader's impact on followers and the leader's behaviours that created this impact (Yukl, 1999). In this way, transformational leadership differs significantly from transactional leadership, which, as noted previously, is a top-down exchange process in which workers are motivated by expected compensation for performance. This approach is also sometimes referred to in the literature as a managerial approach to leadership (Bush, 2018), where leaders are seen more as managers who typify organizational hierarchy and prescriptive policies. Transformational leadership, however, seeks to nurture followers in internalizing the vision of change, so that they become intrinsically motivated to achieve the new organizational goals (Yukl, 1999). Given the focus on the management aspects of transactional leadership, transformational leadership is not held in high regard in management studies (Berkovich, 2016).

Transformational leadership is also widely linked to charismatic leadership throughout much of existing research (Yukl, 1999), and in some cases charisma is viewed as an essential component of transformational leadership. However, it is important to recognize that while a transformational leader is thought to be charismatic, a charismatic leader may not necessarily be

a transformational leader (Bass, 1985). A critical analysis of transformational and charismatic leadership approaches suggests that research has been limited in the study of the underlying behavioural influences and how these behavioural influences affect factors of follower behaviours such as motivation, commitment to task, attitudes and behaviour (Yukl, 1999). As well, the instrument being used to measure the dimensions of transformational leadership, the *Multifactor Leadership Questionnaire* (MLQ) has given rise to conflicting opinions as to the validity of the dimensions being measured (Berkovich, 2016). Another issue of concern for theorists is that transformational leadership is seen to be a process to motivate individual followers, not an organizational group. Research does not sufficiently examine transformational effectiveness in terms of group dynamics (Yukl, 1999). While this may or may not be a valid observation, the fact that the transformational approach is focused on the importance of followers in the change process, nurtures growth in followers, and has a strong component of morals and values (Northouse, 2016), makes the transformational leadership approach an ideal vehicle for effecting change in the context of my OIP. As a transformational leader and environmental mentor, my leadership role involves working individually with school leaders, to initially build trust and nurture collaboration (Northouse, 2016). The primary role of a leader is to build strong relationships with followers (Kouzes & Posner, 2012), and a transformational leader would need to employ effective interpersonal skills to promote essential positive and productive relationships (Handford & Leithwood, 2013). Achieving positive relationships with individual school leaders, (e.g., the HFPS principal), will be critical to the implementation of this OIP, as they will be the first step in the path to embracing the visions of the planned organizational change, which is to adopt a program of environmental education and sustainability in their schools.

There is another relevant factor in choosing the transformational leadership approach to address this OIP. Environmental sustainability has local and global implications and is a topic entrenched in moral purpose and values (Kensler & Uline, 2017). Sustainability is an evaluative concept which has “an inherent ethical dimension and denotes a fundamental ethical issue” (Becker, 2012, p. 1). There is a need for human beings to understand their responsibility to, and dependence, on nature, as well as their obligations for global citizenship (Becker, 2012). In terms of religious underpinnings of environmental sustainability, indigenous cultures, for example, believe themselves to be the caretakers of the land, and that their interconnectedness with the land is the source of their cultural identity, wisdom and knowledge. The land is integral to their beliefs and values (Simpson, 2002). In addition, caring for creation is one of the seven tenets of Catholic school teaching, and there is a renewed call by Pope Francis (2015) “for moral and spiritual transformation in our connection to earth’s ecosystems” (p. 1).

Considering these moral and ethical factors inherent in environmental sustainability, it is necessary to adopt a leadership approach which aligns with this moral and ethical focus. Transformational leadership comprises a strong moral dimension, holding followers to a higher standard (Burns, 1978), which makes this approach unique among leadership theories. Bass and Steidlmeier (1999) suggest that “to be truly transformational, leadership must be grounded in moral foundations” (p. 1). They further suggest that leadership ethics has three components: the leader’s moral character, the validity of the morality embedded in the leader’s vision, and the socially ethical actions taken by followers. There is considerable research to support the moral efficacy of engaging in the development of environmental education and sustainability programs (Kensler, 2012; Kensler & Uline, 2017; Furman & Gruenwald, 2004; Buckler & Creech, 2014,

NAEE & Stanford University, 2017), suggesting that the components of ethical leadership (Bass & Steidlmeier, 1999) are well represented in the change process embedded in this OIP.

The review of the components and critical analyses of the transformational leadership approach, as well as other theories such as adaptive leadership and shared leadership, suggests that the transformational leadership approach best aligns with the purpose, goals, process and expected outcomes of this OIP. The inclusion of the moral component in this approach is a significant factor in using transformational leadership to pursue the change process inherent in this OIP.

Framework for Leading the Change Process

As discussed in Chapter 1, the Burke and Litwin (1992) *Causal Model of Organizational Change* emphasizes both process and content, and focuses on both transformational and transactional factors that need to be present to effect organizational change. This model is partially based on the *7S Model* developed by Pascale and Athos (1981) which considers organizational variables such as structure, systems, skills, and shared values, and how they interact with each other. While including these variables in their model, Burke and Litwin (1992) have expanded on this to include external variables in order to create a causal framework that addresses which organizational factors are integral to successful change and how these factors work together to achieve change goals. As well, they have defined both organizational and external variables as either transactional or transformational, and have included leadership as a transformational process.

The recognition of leadership as a transformational factor aligns well with the philosophy of the transformational leadership approach in addressing this OIP. Additionally, Burke and Litwin (1992) note the distinction of leadership as being separate from management, which they

identify as a transactional influence on the change process. This distinction is reflected in the works of other researchers as well, as noted in the previous section (Bass, 1985, 1996; Bush, 2018; Kouzes & Posner, 2012), and will be important in establishing causality when assessing current and desired state in the change process.

Another transformational variable emphasized in the Burke and Litwin (1992) model is culture. Organizational culture is formed by ideas that develop into a pattern of assumptions (Schein & Schein, 2017) and knowledge of the organizational history is essential to understanding organizational culture (Schein, 1983). In contrast, climate is designated as a transactional factor and is distinguished from culture in that climate results from the cumulative effect of ongoing impressions and feelings in the workplace. Burke and Litwin (1992) suggest that “climate results from transactions, culture requires transformation” (p. 530).

Other transformational variables noted in this model are external environment, organizational mission and strategy, while structure and management practices are included in the transactional factors affecting organizational change. The model clearly demonstrates that in order to embark on an informed change process, all transformational and transactional variables need to be considered for their causal relationships to each other and to the organizational state.

While Burke and Litwin’s (1992) *Causal Model* of organizational change has components essential to understanding all the variables inherent in this PoP, it is lacking in defined process. The *Change Path Model* outlined in Cawsey, Deszca and Ingols, (2016) reflects a clearly defined process. This structured model comprises four clearly outlined steps: *Awakening, Mobilization, Acceleration, and Institutionalization* (pp. 53-55), and while it is a linear model in that it moves through a series of defined stages, it also encompasses many opportunities requiring transformational leadership strategies such as collaboration with, and

empowerment of, followers. As discussed in Chapter 1, GADSB supports, but does not mandate, environmental education across the system (2016a) and it is at the discretion of each school leader whether or not to embrace environmental and sustainability initiatives in their schools. Because the leadership approach employed will be pivotal in effecting change, the change model must align with that leadership approach. The *Change Path Model* (Cawsey et al., 2016) is such a model, and would also be conducive to the consideration of the transformational and transactional variables outlined in Burke and Litwin's (1992) *Causal Model*, and the PESTE Analysis (Cawsey et al, 2016) discussed in the previous section, since the first step in the *Change Path Model* requires consideration of all possible variable that could influence the change plan and implementation.

Step one in the *Change Path Model* is the process of *Awakening*. In this phase, the first challenge is to assess the current organizational state in order to understand what needs to change in the context of environmental education and why. At this stage it is important for both leaders and followers to understand the expectation that “change is a process, not a point in time or a single event” (Napier, Amborski & Pesek, 2017, p. 132), and that the journey from the current organizational state to the desired future state should be seen as a continuum. Nadler and Tushman's *Congruence Model* (1989) will be used to analyse where the organization currently lies on that continuum. Similar to the Burke and Litwin (1992) model, the Nadler and Tushman approach is representative of an open systems model, meaning that as an analytical tool, both internal and external variables (i.e., history/culture and environment), and how they interact, will be considered. The history and culture of the school and the community will provide essential understanding to inform the change process, and discussion of the moral purpose embedded in environmental education precepts will provide a further rationale for supporting sustainability.

The *Awakening* stage provides the opportunity for the leader and followers to work collaboratively to embrace the new vision and set goals to achieve it.

Step two of the *Change Path Model* (Cawsey et al., 2016) is *Mobilization*. During this phase the transformational leader will build relationships with followers, nurturing and encouraging their participation in the change process. At the same time, leaders and followers will expand their knowledge and understanding of the change factors and work collaboratively to establish school needs in the context of environmental education initiatives. To do this, leaders and followers will need to examine school mission and value statements, existing curriculum, school history and culture, and resources available in order to make informed decisions about the implementation of sustainable change. During this stage, the gap between current and future desired state becomes much clearer, allowing needs to be confirmed and goals to be set.

The next step in this model is the *Acceleration* stage, at which point an action plan is developed based on the solidified goals of the previous step. This is also a critical time for the skills of the transformational leader to be in place as it will be essential to the success of this OIP that by this point followers have embraced the new vision and are demonstrating initiative in working towards a plan to reflect this new focus (Kouzes & Posner, 2012). During this stage of transition, the vision and goals may need to be revisited and re-consolidated to ensure they still align with the identified needs of the school. For example, it may become evident that the goals need to be more narrowly defined in order to plan a more feasible time line to meet changes.

Step four, the final stage in the *Change Path Model* (Cawsey et al., 2016) is the *Institutionalization* phase. This phase represents the end of the transition period, and the final implementation of the plan, which will include establishing a monitoring plan whereby achievement of goals can be measured. It will be important during this stage to ensure a time line

to meet goals is in place so that ongoing progress can be assessed and communicated to all stakeholders.

Upon comparing the *Change Path Model* (Cawsey et al., 2016) to the Burke and Litwin (1992) *Causal Model*, the conclusion is that the *Change Path Model* will provide the framework for change for this OIP, while including the transformational and transactional variables described by the Burke and Litwin's (1992) *Causal Model*, to enhance the variables outlined by Cawsey et. al (2016). In addition, both models are linear, both provide opportunities for transformational leadership initiatives, and both speak to the influence of external factors affecting change, an important consideration when planning to newly implement environmental education programs in the school. However, the *Change Path Model* is more process oriented than the *Causal Model*, which would provide a clearer framework and structure within which to effect a successful change plan. Therefore, the *Change Path Model* (Cawsey et al., 2016) will be used as the primary change model for this OIP, augmented by the precepts of the *Causal Model* (Burke & Litwin, 1992).

However, before reaching this conclusion, several change models were also considered and critically analysed to inform the most appropriate change model choice. For example, Cawsey et al. (2016) discuss five other change models, including Lewin's (1951) *3-Stage Theory of Change* described as *Unfreeze-Change-Refreeze*. However, this model is very simplistic and focuses on change happening *to* followers, rather than followers working to be part of the change. As well, transformational and transactional processes are not identified, suggesting that this model would not work well in the context of this OIP.

Another change model described in Cawsey et al. (2016) is Kotter's (1996) *Eight-Stage Process*. While Lewin's (1951) model was too simplistic, Kotter's model is too detailed and

prescriptive, as this model requires that the organization successfully complete each stage before moving on to the next as failure to do so may compromise the next stage. An extension of Lewin's (1951) model is Beckhard & Harris's (1987) *Managing the Change Process*. This three step model emphasizes the process of gap analysis as the most important step in the model. The identification of the gap between the current and desired organizational state is stressed as pivotal to the success of the planned change process; however, this model appears limited in the description of the implementation phase of change.

Another possible model to consider is Gentile's (2010) *Giving Voice to Values* model. However, while this is a values-based model, the focus on moral values is more conflict-based than the moral purpose entrenched in sustainability issues. As well, the moral dimension is not the only variable to bring to the change process discussions. The *Change Path Model*, by comparison, is conducive to including this factor in the planning process, as well as other essential variables impacting the organization.

A final model described is Duck's (2001) *Five-Stage Change Curve*. This model focuses on the followers' emotional journey in response to change, and the leader needs to be self-aware in recognizing his or her own response to change while recognizing the emotional needs of followers. This model seems to reflect some of the components of transformational leadership, although the description of the leader's role in this model also seems very hierarchical. Cawsey et al. (2016) note "it is the leader's role to push people to see the truth of their situation and to wake them up" (pg. 51). This focus seems contrary to the primary objective of transformational leadership, which is to build relationships as the building blocks of trust and collaboration (Kouzes & Posner, 2012).

As previously mentioned, the conclusion drawn from these comparisons is that the most appropriate change model conducive to the successful implementation of this OIP is the Cawsey et al (2016) *Change Path Model* in combination with the Burke and Litwin (1992) *Causal Model* which incorporates a focus on transformational leadership (i.e. the underpinning of this OIP), and both transformational and transactional variables. Consideration of these variables will be discussed further in the following section. See Appendix A for an illustration of this process.

Critical Organizational Analysis

Change is a challenging process (Gleick, 1987). Many changing variables are at play, including the scope of the planned change, attitudes of the followers, and external and internal influences. As well, followers may feel threatened by the uncertainty of their roles in the changing environment (Bolman & Deal, 2013), and may be unaccepting or resistant to the change process. At HFPS, presenting a sound rationale for adopting environmental education and sustainability initiatives will be an essential first step in nurturing change readiness.

As noted in Chapter 1, there is extensive research to support the inclusion of environmentally sustainable goals in education programming. There are many global and local issues such as climate change, natural disasters, biodiversity loss, fossil fuel use, and single use plastics that are threatening our planet, our communities and our way of life (Furman & Gruenwald, 2004). Many of these issues are precipitated and exacerbated by our individual choices. What is required is a shift in thinking from self to global responsibility and individual awareness of the reciprocal and interdependent nature of our relationship with the environment (Kensler & Uline, 2017). There are many studies that show that school is the ideal place to nurture this shift from an egocentric perspective to a world view (NAEE & Stanford University, 2017; Kensler, 2012; Ontario Ministry of Education, 2007, 2009), and the role of the school

leader is crucial in not only nurturing environmental education changes in schools (Bowers, 2010; Kensler, 2012; McClam & Diefenbacher, 2015), but also in assessing the organizational readiness for change. To that end, as the change leader supporting HFPS, the change readiness chart (Cawsey et al., 2016, p. 108) has been completed for the purpose of rating the school's readiness for change as the first step in our critical organizational analysis. As noted in Chapter 1, this chart (adapted from Stewart, 1994; Holt, 2002; & Judge & Douglas, 2009) takes the form of a questionnaire comprising 36 questions under six readiness dimensions, including previous change experiences, credible leadership and change champions, openness to change, rewards for change, and measures for change and accountability. For each answer, a score of +1, -1, +2 or -2 is awarded. An accumulated score below 10 indicates the organization is not ready to accept change, and an attempt to implement a change process will likely be unsuccessful. HFPS achieved a score of 20 on this change readiness questionnaire, a positive indicator that moving forward with change is a viable option.

Having completed the process, there may be some areas of the questionnaire that may need clarification. For instance, one question focuses on whether the organizational rewards system values innovation and change (Cawsey et al., 2016), and the question then arises as to what constitutes a reward. This question is addressed (Cawsey et al, 2016 pp. 110-111) noting that the term rewards may be construed to mean either intrinsic or extrinsic rewards, which raises further debate about the sustainable value of extrinsic rewards. Additionally, it could be argued that extrinsic rewards can preclude followers from internalizing the change vision and goals (Cawsey et al., 2016). As a transformational leader at HFPS, the focus will be on the use of intrinsic rewards to build sustainable relationships and trust, and to mobilize followers to embrace the leader's vision of change.

Having confirmed that the level of change readiness indicates that HFPS is predisposed to a successful change process, the *Change Path Model* (Cawsey et al. 2016) can be applied, beginning at the first stage, *Awakening*. During this phase, the first step is to conduct a gap analysis to determine the current organizational state in the context of environmental education, the desired future state, and assess the school's needs in terms of addressing the gap created. The Nadler and Tushman *Congruence Model* (1989) offers a framework to support the process of organizational gap analysis. This model presumes four factors that are key to organizational performance: the work of the organization, the people who work in the organization, the structure (e.g., formal organization), and the culture (e.g., the informal organization). The more congruency that exists between the four factors, the better the organization's performance. The model considers input from several factors, including environmental analyses such as the PESTE analysis discussed in Chapter 1, available resources, the history and culture of the organization and environmental influences to identify organizational needs. In the case of HFPS, the history of the school will be of particular significance in the discussion of the current organizational state since all historical decisions made by the school leader(s) to date have led to the current situation (Cawsey et al., 2016).

Historically, the GADSB's published sustainability program and energy use data (GADSB, 2016b, GADSB, 2016c) suggest that HFPS has never been an environmentally sustainable school. As well, Ontario EcoSchools (2018) data shows that HFPS does not subscribe to this provincial environmental certification program, and there is no evidence of environmentally sustainable initiatives in the school. A review of school data such as report card comments, school and class newsletters, school improvement plans and school growth plans

demonstrates that neither environmental education programs, nor sustainable practices, such as recycling and green bin usage, are occurring in the school.

Culturally, the mindset that has developed at HFPS, while not overtly resistant to change that would result in adopting environmental education goals, is clearly one of waiting to be convinced. This situation seems somewhat reflective of the “sigmoid curve” (Handy, 1994, p.50) and cited by Cawsey et al. (2016, p. 43) which is a graphic illustration of how organizational practices that were once thought effective, change over time in response to varying influences. While these practices are no longer applicable, workers have not adapted to the change and moved on. Similarly, the staff at HFPS have not yet grasped that environmental practices and global responsibility have become a focus in today’s world (Kensler & Uline, 2017), and organizational practices need to respond accordingly.

Having considered the variables (i.e., history and culture) using the Nadler and Tushman *Congruency model* (1989), transactional and transformational variables outlined in the *Awakening stage* of our *Change Path Model* (Cawsey et al., 2016) and Burke & Litwin’s (1992) *Causal Model* need to be considered as well. Data based on transactional factors such as organizational structure, management practices and climate, as well as transformational factors such as leadership, organizational mission and strategy, and the external environment all need to be assessed to provide a clear picture of current organizational state to inform the change plan.

One particularly important aspect of the external school environment is the school community, which is highly involved in all facets of HFPS daily life. The school community has demonstrated ongoing support for all school initiatives, and regularly demonstrate an interest in volunteering to coordinate environmentally responsible practices in the school. This support demonstrated by the community is a vital component in the success of any change processes

(Furman & Gruenwald, 2004) and will have the added benefit of being a potentially positive influence on staff motivation.

Once the data has been collected from the examination of all relevant variables, and the gap has been clearly defined, the change vision of the desired future organizational state will be established, and the preliminary goals will be set (Cawsey et al., 2016). In the context of environmental education initiatives, the gap analysis data resulting from the application of Nadler and Tushman's *Congruence Model* (1989) has shown that the current state at HFPS is that no programs are in place. Therefore, identifying the desired state is the next important step. It is important to keep in mind during this process that it is better to adhere to the S.M.A.R.T. goal criteria – that goals should be specific, measurable, achievable, relevant, and time-based (Doran, 1981). The important part of this acronym is the word “achievable”. If goals are not feasible, the change goals will not be realized.

For HFPS, goals should be defined in two categories: environmental education programming, and sustainable practices. In terms of sustainable practices, a beginning goal might be to initiate a recycling program in the school, and establish environmental teams comprised of school staff, students, and parents, so that all stakeholders are invested in the change journey. In terms of the environmental education focus, a goal might be to embrace the goals and strategies found in the Ontario Ministry of Education's (2009) environmental policy document and to access the Ontario EcoSchools (2018) certification guide to increase awareness and knowledge of teaching resources and strategies. It is also important to remember, as mentioned in the previous section, that change is a process, not a single event (Napier, Amborski, & Pesek, 2017). Additionally, while developing goals, it is necessary to establish a time line so the process can be monitored and achievement measured.

Once the above steps are complete, the process will move to the second stage of the *Change Path Model, Mobilization*. At this stage the role of the leader and the transformational leadership approach will be particularly pivotal. Building trusting relationships with followers will be essential to empowering them to embrace the newly established vision and goals (Kouzes & Posner, 2012; Northouse, 2016). During this phase, the vision and goals will be reviewed and consolidated, and the change leader and followers will continue to build positive and empowering relationships.

When change vision and goals have become solidified, the school team will enter the third stage of the *Change Path Model* (Cawsey et al., 2016), the *Acceleration stage*. At this point the change leader will facilitate the implementation of the plan, collaborate with followers in developing strategies to address goals, and ensuring followers' needs, such as time and resources, are met. This stage is a transitional step, leading to the final stage, *Institutionalization*.

When the change process has reached the final stage, it is essential, as mentioned previously, to have a plan in place for monitoring and tracking initiatives to assess the progress of, and measure the achievement of, change goals. Change must be measurable (Cawsey et al., 2016) in order to continually inform next steps.

As the change leader for HFPS, I would suggest that the last 2 stages of the *Change Path Model* (i.e., *Acceleration* and *Institutionalization*) be frequently revisited to analyse the change data, and review and adjust the change vision and goals as warranted. The expectation during these review processes is that staff will become more confident as they are empowered to suggest initiatives to expand and complement the change journey, and engage in ongoing collaborative learning opportunities. The transformational leadership approach will be

particularly evident during these final two stages as the goal will be nurture and empower leadership in followers so that they assume ownership of the change process and sustainability.

Possible Solutions to Address the PoP

In the previous section, the importance of setting change goals that are appropriate for the needs of the school was emphasized. In many GADSB schools that are not involved in environmental sustainability initiatives, some of those needs include a lack of awareness and understanding about the value of environmental education in supporting student achievement, and the lack of knowledge about the rationale for, and the implementation of, sustainability initiatives (Kensler & Uline, 2017). For example, during many environmentally-focused discussions, principals have expressed the concern that environmental education programs are add-ons to the regular teaching expectations, and take away from the core curriculum subjects, such as mathematics and language (Gough, 2005). The following addresses three possible solutions to these needs and concerns: (a) formal mentoring of school principal and staff; (b) professional learning communities; and (c) the whole school approach.

Formal Mentoring of School Principal and Staff

As an initial and ongoing strategy to nurture professional growth in staff, mentoring has proven to have positive benefits to mentees (e.g., mentees are school principals and school staff) in terms of greater awareness, knowledge, self-confidence, encouragement and feedback to promote continued growth (Ehrich, Hansford & Tennent (2004). In addition, studies have shown that the mentor benefits from the process as well, growing in both personal and professional development (Ehrich et al, 2004).

The mentoring process is a reciprocal, multi-layered journey that is highly dependent on the development of positive interrelationships (Ehrich et al. 2004). To that end the

transformational leadership approach that will be used in this OIP aligns well with the mentorship framework in that the focus will be on working collaboratively with followers, and empowering them to adopt and internalize an environmental lens.

In addition to demonstrating a transformational leadership approach, it is also critical to the success of the mentoring process that the mentor is competent not only as an instructional leader but also a skilled facilitator who is able to build trusting and collaborative relationships with followers. At the same time, the mentor works in an ongoing way to expand the relationships while building a support network that will add validity and depth to the partnership (Stock & Duncan, 2010). In addressing this OIP, a GADSB trained principal mentor holding environmental education specialist qualifications, and working under the umbrella of the GADSB sustainability department, will be chosen as the mentoring facilitator. As such, the mentor / change agent has formal agency to influence change in schools.

The issue of followers perceiving themselves as partners in the process is critical (Tschannen-Moran, 2001) and is a key component in building trust. The greater the trust between leaders and followers, the more effective the collaboration. When followers perceive collaboration to be genuine, they believe they have a definite stake in the decisions to be made, enhancing both their capacity and their engagement. Kouzes and Posner (2012) also propose a correlation between trust and collaboration, suggesting that the leader as a mentor / coach is instrumental in supporting followers in developing their capacity.

Proposed Mentoring Framework/Process. The following will outline the stages and expectations for the proposed mentoring process, including the initial meeting with the principal, the subsequent meeting with the principal including staff, an outline for follow up interim

meetings with the principal and staff, resources, and possible next steps and challenges to the mentoring process.

Initial meeting with principal (3 to 5 hours). The goal of the first meeting of the mentor with the principal is to discuss the current state of environmental education and practices at HFPS and to determine and address the current focus and mindset of staff in terms of embracing a focus of sustainability. One of the outcomes of examining the cultural and history of the school through the Nadler and Tushman (1989) *Congruence Model* was to discover that there was a general belief in the school that implementing environmental programs would take away from the teaching of the core subjects such as mathematics and language. In order to change this mindset, it is necessary to encourage the principal, and subsequently the staff, to reflect on the current research data, as reflection has been shown to be a powerful tool in supporting a change in beliefs, attitudes, and practices (Ehrich et al., 2004), and it is important to build a strong environmentally focused philosophy as a building block for the implementation of sustainable initiatives.

There is considerable research to support the rationale for incorporating environmentally based programs as part of the school's pedagogy, particularly in terms of their value in reaching student achievement goals (Kensler, 2012; Kensler & Uline, 2017; NAEE & Stanford University, 2017). Therefore, the first meeting with the principal of HFPS will include a review of relevant data, and the nurturing of a new lens through which to consider teaching and learning programs (Kensler & Uline, 2017). An important review of 119 peer reviewed studies showed that environmental education programs for K-12 students increase not only students' environmental knowledge, but also showed that such programs improve academic performance and critical thinking skills (Ardoin, Bowers, Roth & Holthuis, 2016). The data clearly shows the

cross-curricular nature of environmental education programs, encompassing all aspects of curricular learning, and is inclusive of all learning groups.

The goal of this initial meeting is to review the identified short and long term goals and to support the principal in leading staff in embracing a focus on sustainability as a relevant part of teaching and learning, and student achievement.

Meeting with principal and staff (3 to 5 hours). The goal of this meeting is to inspire, motivate and encourage staff, and set the foundation for building positive relationships and trust (Kouzes & Posner, 2012). It will be important to reassure the staff that the change to incorporating environmental education programs is a continuum, a journey not an event, as discussed in the previous section. As well, this meeting involving the principal and staff is critical as a first step in building capacity and collective responsibility, both of which are necessary to creating a sense of collaborative support, a sense of ownership of the problem among the staff, and group motivation to meet the challenge (Sharrat & Fullan, 2009). It is the role of the transformational change leader to mentor the principal and staff in supporting these conditions (Harris & Jones, 2012). The school data and supporting research will be reviewed and the principal will take a leadership role as facilitated by the mentor in reinforcing the findings of the research (Kensler & Uline, 2017).

At this meeting, a range of resources will be introduced and small step goals will be developed to move towards the long term goals. As well, a draft plan and strategies will be formed, which will include the roles of students and parents in this change process. An essential component of this plan will be the inclusion of a time line and a monitoring and evaluation method.

It is important that the mentor meets with the principal before and after this meeting with staff to review and provide mentoring support for this plan. As well it is important to maintain communication through phone and emails between this and the next meeting.

Interim meeting with principal and staff (3 to 5 hours). At this meeting, goals will be reviewed and an analysis of the new current state needs to occur (Cawsey et al, 2016). Questions such as where are we now, what has gone well, what unexpected barriers have arisen need to be addressed. This discussion will be about problem solving, feedback, encouragement and positive reinforcement. It is important to meet with the principal before and after this meeting to ensure a gradual release of responsibility takes place. Through this co-planning and reviewing process, the principal benefits from the modelling of the more experienced and knowledgeable mentor and learns to create, lead, and engage her staff in rich learning opportunities (Schwille, 2008). The mentor gradually steps back, and the principal, having gradually internalized new collaborative approaches to problem solving and decision making (Nemser & Beasley, 1997), takes a more prominent leadership role in the change process.

Next steps in the mentoring process. Continue the gradual release of responsibility. Additional meetings can be planned with the principal, or principal and staff if required, and regular communication needs to be in place. However, the goal of successful mentoring is that it builds leadership and capacity in the mentee(s) (Ehrich et al., 2004), so that the mentor's involvement is no longer required. This goal is achieved over time as studies have shown that as the mentoring process continues, the frequency and quantity of mentoring support decreases as the mentees demonstrate increased engagement, knowledge and expertise (Collet, 2015).

Resources required. Time is the most important resource to support the formal mentoring process, and the most costly, as significant teacher release time will be required.

However, it is important to validate the process in order that the followers perceive that it is valued by the leaders (Kouzes & Posner (2012).

A GADSB trained and qualified mentor, with experience and credentials in environmental education and sustainability programs is essential. A poorly trained mentor is detrimental to the process (Stock & Duncan, 2010). This resource is at no cost to the school and has the additional outcome of demonstrating the commitment of senior management to the process, a criterion noted on the change readiness questionnaire discussed previously (Cawsey et al., 2016).

Environmental education resources are readily available either on line or hard copy (see Appendix A). These might include *Natural Curiosity* (University of Toronto, 2011); *Certification Guide* (Ontario EcoSchools,2017); *Acting Today, Shaping Tomorrow* (Ontario Ministry of Education, 2009). All of these resources outline not only the rationale for environmental education programming in the schools, but also comprehensive goals and strategies for successful environmental education programming implementation.

Possible issues and challenges. While the GADSB currently supports the mentoring program by committing financial and personnel resources, the continuation of the program depends on ongoing and future commitment being embedded in the organizational focus and plan (Ehrich et al., 2004). Therefore, it is important that the rationale for the continuation of the environmental mentoring program is supported by both quantitative and qualitative data that demonstrate clear gains in student academic achievement and environmental awareness.

Working with, and addressing the needs of, resistant staff members is a potential issue in this process (Stock & Duncan, 2010). For the mentoring process to be effective, there needs to be an ambience of collaboration involving all staff, including teachers and support staff. Finding

common ground where mentor and resistant staff member can meet and move forward can be a challenge and requires a leader skilled in nurturing interpersonal relationships (Kouzes & Posner, 2012).

Allocation of resources, including money, materials and time, at the school level can be a challenge for principals (Chawla & Flanders Cushing, 2007). However, priorities need to be established as a collaborative process between principal and staff to ensure all stakeholders have input into decision making (Kouzes & Posner, 2012).

Conclusion. Studies support the value of formal mentoring programs (Stock & Duncan, 2010; Ehrich et al., 2004) and suggest the benefits of mentoring outweigh the challenges to implementation especially since once the collaborative culture and mentoring are in place, they will sustain future initiatives.

Professional Learning Communities

Professional collaboration in schools is increasingly taking the form of professional learning communities (PLCs) as a powerful tool to effect organizational change and improvement (Jones & Harris, 2014). They are also shown to change teachers' beliefs and practices and increase student achievement.

The role of the principal in a PLC is critical in developing the supporting conditions that are conducive to successful collaboration, ensuring that initial professional support (e.g., a formal mentoring process) has helped staff align goals, planning and possible strategies (Jones & Harris, 2014). Initially, the organization of the PLC must include all teaching staff, and as many support staff as possible, including the school caretaker. As this collaborative group moves through the stages of the *Change Path Model* (Cawsey et al., 2016), and the stages of the communication plan (Cawsey et al., 2016), especially the midstream change phase, the members

of the initial PLC may be reduced to a smaller decision-making group who will then take responsibility for reviewing and monitoring of goals and progress, and ensure communication of monitoring and assessment to all stakeholders takes place. PLCs can occur in many different formats; however, the underlying assumptions are collaboration and willingness to attempt new strategies (Jones & Harris, 2014).

Allard et al. (2007) discuss their work using a collaborative learning community that focused on reflection and narrative inquiry. Their process involved participants using oral or written narratives to consolidate their deep reflections on their professional practice and share the resulting learning. Allard et al. (2007) found that through the discussion of teacher narratives, reflective skills were deepened, new learning acquired and professional practice was strengthened.

Using story telling (i.e., narratives) as a tool in collaborative learning is the pivotal strategy in the work of Allard et al. (2007), and in the context of the environmental education change process, will be a useful vehicle when examining change variables such as school history and culture. Narrative research is the study of how human beings experience the world through stories, and education is the construction and re-construction of social stories (Connelly & Clandinin, 1990) as told as a part of an individual's reflections and conversation. These reflections contribute to the cumulative culture of the school and help to reinforce the connections to an individual's professional practice. From that perspective, these narratives can help to inform the goals to support the change process at HFPS. Use of storytelling in this context will be an important vehicle for empowering others to share their experiences as building blocks for discussion, develop trust in sharing and instill ownership of the process.

Another form of PLCs is outlined by Goleman, Bennett and Barlow (2012) who have developed four strategies to create an ecoliterate learning community, which is very relevant to this OIP. The goals of this PLC are to collaborate in building knowledge and practices to enhance ecoliteracy, and to develop strategies to apply them in an environmental education program.

The foundation for this collaborative group work is a learning circle (Goleman et al, 2012) which provides the format for dialogue, enhanced engagement and professional growth. The four strategies described are: (a) personal reflections; (b) structured conversations; (c) collaborative lesson design; and (d) teaching rounds.

Personal reflections provide participants with an opportunity to think about how they want to shape their thoughts before vocalizing them in the group. This strategy is in contrast to the previously discussed PLC format where narrative stories based on reflections were encouraged.

Structured conversations, the second strategy, are responses to a posed open-ended question on a challenging or perhaps controversial problem. These questions are designed to stimulate discussion and create new ideas and strategies to apply to teaching practice at HFPS.

The third strategy, collaborative lesson design, encourages teachers to work together to plan lessons, either for a single grade or school wide. As teachers engage with each other, the focus is using all participants' input to develop creative and motivating lessons.

Teaching rounds is the fourth strategy which Goleman et al. (2012) compare to medical practitioners discussing ways to address difficult challenges. Similarly, teachers would collaborate to discuss the success and value of a particular lesson, and how it can be changed to more successfully meet students' needs.

Resources required. In both of the above examples, these PLCs will require a significant allocation of time and money for teachers to be released to fully and successfully participate in the process. The ecoliterate PLC requires additional release time for teachers to participate in teaching rounds. The print resources would be the same as for the mentoring solution.

Conclusion. While the narrative PLC has merit as a possible strategy to inform the gap between current and desired state of environmental education and sustainability initiatives at HFPS, it is limited as tool to inform strategies for change. Stories of the past help to inform the present, but the present needs to use current data to inform goals conducive to reaching the desired future state of environmental education. Nevertheless, it is important to understand the organizational history that has contributed to forming the current culture (Schein, 2010). That information, combined with current data, helps to provide a roadmap for the change path.

Whole school approach – Education for Sustainable Development

Education for Sustainable Development (ESD) is a comprehensive view of schools that looks at the integration of global ecological goals (e.g., conservation, social justice, and citizenship) into the school's teaching and learning goals (Gough, 2005). This concept evolved from the United Nations Decade of Education for Sustainability which was a plan in place by UNESCO from January 1, 2005 to December 31, 2014, and comprised a vision for a quality environment for all (UNESCO, 2004). ESD basically shifts the focus in thinking from academic subjects only to include environmental education as well as social justice goals (Gough, 2005). As well, traditional environmental education programs have focused only on raising awareness of environmental issues, assuming this would lead to improved environmental behaviours (Tilbury & Wortman, 2005). However, research has shown that this is not the case, and has resulted in a

movement from the traditional classroom format to one of more student-focused, inquiry-based, and placed-based teaching and learning (Tilbury & Wortman, 2005).

Eames (2009) has developed a framework for whole school approaches to EFS, based on the New Zealand Teaching and Learning Research Initiative (Eames, Barker, Wilson-Hill, & Law, 2010). This framework highlights 25 variables of the whole school approach, divided into four categories: (a) people (10 variables); (b) programs (6 variables); (c) practices (3 variables); and (d) place (3 variables). These categories and variables essentially form a rubric with assessment qualifiers such as “absent,” “preparatory,” “emerging,” “developing,” and “well developed” to indicate the degree to which the variables in each category have been met (Eames, 2009. p.3). However, Eames (2009) emphasizes that this framework is not intended to be used as an evaluative tool, but rather as a formative diagnostic tool to inform discussion and goals. As well, this framework is to be used with the support of a trained facilitator who can support staff in completing the framework and also in developing goals which align with the interpretation of the framework data.

There are some comparisons of this EFS model that can be made to the Ontario EcoSchools (2018) certification guide, as it is also a self-assessment tool to inform current and desired state of environmental sustainability. This guide is divided into 6 categories: (a) teamwork and leadership; (b) energy conservation; (c) waste minimization; (d) school grounds greening; (e) curriculum; and (f) environmental stewardship. Each category has a rubric consisting of five levels (level 0 to 4) with corresponding indicators: (a) no evidence; (b) emerging; (c) implementing; (d) implemented; and (e) comprehensive. Schools do a self-assessment to reflect where they are on this rubric, and record scores. The schools scores,

combined with a school eco review by Ontario EcoSchools will determine if the school has achieved bronze, silver, gold or platinum ecoschool status.

While the categories in the Ontario EcoSchools (2018) framework differ from the EFS framework developed by Eames (2009), they are less complex and arguably less challenging to measure for self-assessment purposes. As well, a facilitator is not mandated to interpret the categories and sub-categories in the Ontario EcoSchools (2018), although facilitating this self-assessment would be part of the mentor's role in supporting school staff in setting environmental education and sustainability goals for the school.

Resources required for school-wide EFS model. As with the previous possible solutions, a commitment of time and money for release of teachers to work with the mandated facilitator would be required. It is not clear in this model whether there would be a cost to the school for the facilitator.

Conclusions. While the EFS School-Wide approach has merit, it may be too complex for a school such as HFPS which is starting at a current state of zero environmental education and sustainability initiatives in the school. An EFS framework such as the one developed by Eames (2009) could be perceived as overwhelming for a school inexperienced in environmental strategies. However, it is possible that, as the school continues to revisit and revise goals as it moves along the continuum, it may be appropriate to incorporate some of the relevant categories of the EFS framework (Eames, 2009) into the goal planning process.

Summary. Of the three possible solutions discussed, and considering the pros and cons of each approach, the formal mentoring program would be the priority strategy to employ as HFPS begins its journey to establish environmental education and sustainability programs in the school. However, as the mentor steps back and nurtures a gradual release of responsibility

(Harris & Jones, 2012; Schwille, 2008; Collet, 2015), it would be highly recommended for HFPS to incorporate the use of PLCs into their planning process. Doing so would ensure the continued practice of professional collaboration and decision making in terms of setting and monitoring goals and time lines, evaluation of progress and next steps, as well as continued professional growth. As the underpinning of this endeavour, the values, beliefs and ethics integral to environmental sustainability (Kensler & Uline, 2017) must be acknowledged. These will be discussed in the following section.

Leadership Ethics and Organizational Change Issues

Ethics can be defined as a set of beliefs that guide us in our decisions about what is right or wrong, the appropriateness of our behaviour, and in our interactions with others (Burnes, 2009). As an ethical leader, a well-developed sense of moral, ethical and professional beliefs is integral to the promotion of both staff and student learning, well-being, inclusion, social justice, and collaboration. (Ehrich, Harris, Klenowski, Smeed, & Spina, 2015).

In today's education organizational context there are many challenges facing the ethical leader (Cherkowski, Walker, & Kutsyuruba, 2015). As the moral agent for the school, the principal is responsible for "establishing and maintaining a moral and ethical climate in the school", and "must determine the best ethical course of action within a complex web of relationships that make up the school organization" (Cherkowski et al., 2015, pp. 2-3). As moral leaders and agents, school principals are responsible for not only their own behaviour but that of others in the school community. As such, they are required to address the varying needs of a range of staff, students and parents while maintaining positive relationships and a moral and ethical focus.

Transformational leadership, the chosen leadership approach to address this OIP, is also relationship-focused while including a moral dimension that enables the empowering of others to reach for higher moral goals and aspirations. Cherkowski et al. (2015) suggest that transformational leadership is the link between moral agency and moral leadership, as both comprise the foundational focus on moral ethics and empowering relationships.

To examine how moral leadership is applied by school principals in day to day school situations, Cherkowski et al. (2015) use the *Ethical Leaders: Five Domains of Responsibility Model* developed by Starratt (2005). Cherkowski et al. (2015) note that the domains are cumulative, with transactional leadership behaviours occurring in the first stage, and building to transformational leadership behaviours in the final stage. While the authors use this five-domain framework as a vehicle for analysing their data from subject principals, it will be used here to describe how each of the five domains reflect ethical leadership in the context of this OIP.

Domain 1: Responsibility as a Human Being

Cherkowski et al. (2015) describe this domain as one of an “ethic of care” (p. 8). It could be argued that at this stage, the ethical leader must be a caring role model for students, staff, and the community. As do many schools within the province of Ontario, HFPS adopts a character education program, involving a focus on a different character trait each month. It is the role of the ethical leader to take every opportunity to model each month’s character attribute for students so they learn what that trait looks, sounds, and feels like. As well, the school’s mission and value statements (HFPS, 2018a), and the school’s code of conduct (HFPS, 2018b), all reflect a message of respect and caring, along with high expectations for learning. Again, respect and caring need to be modelled continually, along with the expectation that everyone in the school community learns to demonstrate these two character attributes.

In the context of the HFPS newly defined environmental goals, it is a good start to begin to model respect for the environment in both words and actions. A good example might be to redirect students away from tearing off the branches of the young trees on the school yard, while at the same time seizing the opportunity for a teachable moment to talk about all the good things trees do to support a healthy environment. Modelling respect for all living things will become the foundation of environmental learning in the school.

Domain 2: Responsibility as a Citizen and Public Servant

Cherkowski et al. (2015) suggest that this domain is about the democratic focus on collaborative decision-making, and working towards the common good. In terms of collaborative decision-making, both the environmental mentorship program and the implementation of PLCs will be founded in the philosophies of collaboration. As well, the journey to adopt environmental education programming and sustainable practices is reflective of a global citizenship ethic. The Ontario EcoSchools certification guide (2018) is a resource that will be used in this journey. The Ontario EcoSchools (2018) vision statement reads “from the individual behaviours to collective impact, all members of school communities are empowered with the knowledge, skills, perspectives, and desire to act as environmentally responsible citizens” (p. 1). The mission statement reads “our mission is to nurture environmental leaders, reduce the ecological impact of schools, and build environmentally responsible school communities” (Ontario EcoSchools, 2018, p. 1). The environmental programming goals being put in place at HFPS are reflective of these statement and indicate a shift in thinking and purpose from self to global awareness and citizenship as discussed in Chapter 1.

Collaboration involves building trust and relationships (Kouzes & Posner, 2012), which are transformational processes. This stage is seeing the emergence of transformational leadership skills and strategies.

Domain 3: Responsibility as an Educator

This domain speaks to the ethical leader's responsibilities to the teaching profession and to students. As members of the Ontario College of Teachers (OCT), all principals are required to follow the Ethical Standards for the Teaching Profession (Ontario College of Teachers, 1998). These outline the expectation that as members in a position of trust, educators must demonstrate responsibility in their relationships with all educational stakeholders. Members need to behave in a manner that honours the dignity of the teaching profession and be aware of their ethical responsibilities. The Ethical Standards are divided into four areas: care, trust, respect, and integrity. The inclusion of trust is noteworthy, as evidence has shown that trust forms the basis for collaborative relationships, a transformational leadership process.

At HFPS, the principal is honouring the collaborative process and the professionalism of teachers by demonstrating a willingness to engage teachers in the environmental education change initiatives and decision-making to inform the change plan.

Domain 4: Responsibility as an Educational Administrator

This domain speaks more to the management side of the principal role. Arguably, this domain is concerned with transactional practices such as day to day management decisions in the pursuit of implementing the organizational goals (Burke & Litwin, 1992), and to ensure the structure is in place to provide equitable access to learning for all students (GADSB, 2016a). Some of these decisions might include those pertaining to budget, organizational structure, systems issues, and school climate. As well, some of these structure and organizational decisions

may have ethical implications, such as those involving safety of students. However, in the context of this OIP, while transactional practices need to be present to support change, the transformational leadership strategies drive change (Burke & Litwin,1992).

Domain 5: Responsibility as an Educational Leader

At this stage, Cherkowski et al. (2015) suggest transformational leadership is fully in place and “leaders can begin to empower others to build greater moral capacity across the school” (p. 10). In terms of this OIP, that process would include the change plans to embrace the newly developed environmental education and sustainability goals, including the nurturing of environmentally responsible citizens. As in Domain 1, the importance of modelling in setting the tone of the school and leading by example need to be re-emphasized.

Conclusions

As moral leaders, school principals are required to model, facilitate, and expect ethical behaviour at all times for all stakeholders (e.g., school students, staff, parents, and school community). Cherkowski et al. (2015) outline five areas of ethical responsibility of the school principal’s role. Although Cherkowski et al. (2015) describe these areas as cumulative, building from transactional at the first level, to fully transformational at the final level, it could be argued that instead of being a linear progression, the principal must perform all aspects of these domains as situations demand, and that at times the role may demand ethical behaviour in a transactional process, while at other times, the role may be a transformational process. As transformational leadership includes a strong moral component, it is an appropriate approach to meet the moral and ethical expectations of the school leader.

Chapter Summary

This chapter describes the transformational leadership approach that will be used in addressing the change identified for this OIP in the previous chapter. Transformational leadership is analysed in the context of current and past studies (Downton, 1973; Burns, 1978; Bass, 1985, 1996, & Bennis and Nanus, 1985). These studies emphasize that the focus of transformational leadership is on the leader's ability to inspire followers to embrace the leader's vision in implementing organizational change. This chapter also identifies the use of the *Change Path Model* (Cawsey et al. 2016), as the framework to support change, also incorporating some aspects of the Burke & Litwin (1992) *Causal Model*. In addition, this chapter describes three possible solutions to address the change identified in this OIP, including formal mentoring, professional learning communities, and the school wide approach to education for sustainability. Of these three possible solutions, the formal mentoring and professional learning community approaches are the most appropriate to meet the organizational change implementation. Finally, this chapter includes a discussion of the importance of the ethics of leadership in the context of the role of the school leader.

The next chapter will address the change implementation plan, including strategies for evaluation and monitoring the process and the ongoing communication of progress.

CHAPTER 3 – IMPLEMENTATION, EVALUATION, & COMMUNICATION

Change Implementation Plan

As discussed in Chapter 2, change is a challenging undertaking (Gleick, 1987). There are many variables that must be considered in order to ensure that all factors impacting the proposed change and the lenses of all stakeholders are incorporated into the change plan process. As well, it is essential to assess the influence of both internal, external, transformational factors such as those associated with leadership, external environment, organization and culture, and transactional variables such as those associated with organizational structure, systems, management practices and climate (Burke & Litwin, 1992) to determine the scope of the planned change, after which the change vision and goals can be established.

This OIP will utilize the *Change Path Model* (Cawsey, Descza, & Ingols, 2016) as described in Chapter 2, incorporating an examination of the Burke and Litwin (1992) transactional causal variables such as organizational structure, management practices, systems, and organizational climate, and transformational variables such as leadership, culture and organizational mission and values. This process will begin in the *Awakening* stage of the *Change Path Model* (Cawsey et al., 2016), the first step being the completion of the *Change Readiness Chart* (Cawsey et al., 2016, p. 108) by the change leader. As noted in Chapter 2, HFPS scored reasonably high on this chart which is conducive to initiating the next step, implementing the gap analysis in the Nadler and Tushman *Congruence Model* (1989).

The Nadler and Tushman (1989) gap analysis for HFPS clearly showed that there is a large discrepancy between the current state (i.e., there are no environmental education programs or initiatives in place at HFPS) and the desired state of environmental awareness and practice, the desired state being that environmental education and sustainability practices will be

embraced and implemented at some level, yet to be determined through goal setting. While the principal and staff at HFPS have shown to be receptive to change, there still needs to be a process in place whereby the causal variables (Burke & Litwin, 1992) and the perspectives of all stakeholders need to be examined and considered as an integral step in organizational (i.e. HFPS) goal setting. As mentioned in Chapter 2, a significant cultural variable at HFPS is the high level of positive and enthusiastic school community involvement in all aspects of school life. As such the school community will be an instrumental factor in the success of any change initiative. In this case, the school community group is highly supportive of environmental awareness and their influence will be a positive component of the environmental change initiatives at HFPS.

Another important variable to consider is the cultural diversity of both staff and students. As mentioned in Chapter 1, HFPS comprises between 350 – 400 students, most of whom are English language learners. The parents in this school have high expectations for their children's academic and behavioural performance. As a result, parents work closely as partners with the school and there are few behavioural issues to detract from learning. Students have a respectful attitude towards learning as well as towards the teaching, administrative and support staff. The school staff mirrors the attitudes of the students. They are generally a happy, enthusiastic and professional group, comprised mainly of experienced teachers who have been at the school for 15 to 25 years. Most approach problems in a collaborative manner; strong teacher resistance to change is relatively infrequent. The professionalism of the staff, and the respectful students, will be critical factors in looking at the cultural variables to determine the goals and timing of the change implementation plan.

A critical element in the development of a change vision and change goals is the leader's role in the process. Cawsey et al. (2016) cite the work of Jick (2003) in the discussion of three

leadership approaches to vision creation. A *leader developed vision* is one created by the leader with little input from others; a *leader-senior team developed vision* is a top-down approach with leaders at the top of the hierarchy creating the vision, then sharing it with followers. The approach used in this OIP will be the *bottom-up vision*, whereby followers and other stakeholders provide input into the creation of the vision, facilitated by the change leader. At HFPS, this process will involve a number of strategies, including narrative research whereby stories of followers' and stakeholders' experiences are shared to provide a database and roadmap for the vision. Sharing the experiences that have influenced the current state helps to inform the direction and goals for the desired future state, and motivates followers as change recipients (Armenakis & Harris, 2009) to embrace the newly created vision. While a transformational leader's goal is to support followers in embracing the leader's vision (Kouzes & Posner, 2012), the bottom-up vision creating process fits appropriately into the transformational leadership approach (Armenakis & Harris, 2009) as the transformational leader will be instrumental in facilitating the new vision created with input from followers and stakeholders. An important point about using the bottom-up approach is that, while input from all followers and stakeholders will be considered and incorporated into the final vision, it is still the change leader's responsibility to facilitate the creation of a vision that reflects the underlying organizational context.

At HFPS, the change leader's proposed plan, with input from followers, will be to model the school's vision on the Ontario Ministry of Education's (2009) policy framework, stating that Happy Fields Public School will prepare students with the knowledge, skills, perspectives and practices they need to be environmentally responsible citizens. Students will understand our fundamental connection to each other and to the world around us

through our relationship to food, water, energy, air and land, and our interaction with all living things. Happy Fields Public School will provide opportunities within the classroom and the community for students to engage in actions that deepen this understanding. (HFPS, 2018a, p.3).

From this newly established vision, goals can be developed which may again align with the Ontario Ministry of Education's (2009) goals in three essential areas: (a) Teaching and Learning; (b) Student Engagement and Community Connections; and (c) Environmental Leadership. The goals are outlined below with a proposed time frame. Appendices B, C, and D provide a possible rubric for each of these three areas.

Goal #1 - Teaching and Learning

The suggested goal for teaching and learning to align with Ontario Ministry of Education (2009) will be:

By the end of Grade 8, students at Happy Fields Public School will acquire knowledge, skills and perspectives that foster understanding of their fundamental connections to each other, to the world around them, and to all living things (HFPS, 2018a, p. 4).

Although this is a long term goal, it will be part of the immediate implementation plan and timeline, so that current and future students achieve these goals by the end of Grade 8.

Goal #2 – Student Engagement and Community Connections

The suggested goal to align with Ontario Ministry of Education (2009) will be:

Happy Fields Public School will increase student engagement by fostering active participation in environmental projects and building links between schools and communities (HFPS, 2018a, p. 5).

This goal will require planning and strategies for immediate implementation and long term sustainability.

Goal #3 – Environmental Leadership

The suggested goal to align with Ontario Ministry of Education (2009) will be:

At Happy Fields Public School, we will build leadership capacity in staff, students and community members in leading environmental education programming and practices (HFPS, 2018a, p. 6).

This goal will involve the change leader working to empower and motivate the school leader, staff in all roles, students and members of the community to become environmental leaders. To enable success in this area, this goal will require careful planning and strategies to provide leadership opportunities for all stakeholders, as well as strategies to support, reinforce and maintain leadership efforts in all roles (Kouzes and Posner, 2012). Successful encouragement of stakeholders to take on informal leadership roles is a long term process which must be put in place at the outset and continue over time for immediate and long term results.

Vision, Goals and Organizational Context

The proposed new environmentally focused HFPS vision and goals fit well within the context of the provincial (Ontario Ministry of Education, 2009) and GADSB (2016b) environmental policies. At the board level, as mentioned in Chapter 1, while there is no mandate for schools to adopt environmental education practices, the GADSB's sustainability department does encourage schools to become more energy efficient and engage in waste reduction, and also offers a sustainability certification program. As well, as with all schools in Ontario, there is the opportunity to become involved in the Ontario EcoSchools initiatives. In addition, the GADSB has environmental policies in place (GADSB, 2016b) which support environmental awareness

and sustainability initiatives. Therefore, it can be shown that the new vision and goals that will be developed by HFPS will be in alignment with existing organizational policies (GADSB, 2016b).

Arguably, the new vision and goals that will be created at HFPS will be conducive to improved student engagement and achievement. The GADSB (2016a) policy documents articulate a focus on student achievement and there is extensive research to show that engaging in environmental education and sustainability practices improves student achievement and addresses all aspects of the core curriculum (i.e., mathematics, language, and science) as well as the broader curriculum areas such as the arts and social studies (Ardoin, Bowers, Roth & Holthuis, 2016; Kensler & Uline, 2017). In addition, environmental education teaching and learning is inclusive of learners of all levels of ability, learning needs, and cultural backgrounds (Schneller, 2008).

Managing the Transition from Current to Desired State

As previously suggested, change is a journey, not an event, and as such there are many variables and goals to be considered throughout the process. The following will discuss three variables (i.e., stakeholders, empowering others, and supports and resources) that will influence the implementation success of this OIP.

Stakeholders. It is important that the transformational change leader recognizes and understands that stakeholders move through a series of reactions to change. Cawsey et al. (2016) discuss three stages of change: (a) *Before the Change*; (b) *During the Change*; and (c) *After the Change* (p. 231). *Before the Change* would occur as part of the *Awakening* stage of Cawsey et al. (2016) *Change Path Model*. It is a critical stage as that is where the perceptions of the change leader are initially formed, and those perceptions greatly influence the followers' amenability to

change (Cawsey et al., 2016). As discussed in Chapter 1, a transformational leader needs to build trust in followers by being honest and transparent (Kouzes & Posner, 2012; Northouse, 2016). During the first stage of change, open dialogue forums where exchanges of communication can occur will be important, so that all stakeholders' views can be heard and incorporated into the process. It is at this point that the transformational leader's honesty and transparency are most important as once trust in the leader's integrity is lost, it is very difficult to regain (Cawsey et al., 2016) and that would be highly detrimental to the success of the change process.

Empowering others. As discussed in Chapter 2, this OIP will address empowering others on two levels – the principal, and the staff. In the *During the Change* stage of the process, a formal mentoring process will be in place, through the change leader, to support, and build environmental leadership capacity in the principal at HFPS so that she is better informed and equipped to lead her staff through the environmental education change process, and the subsequent sustainability of the changes. Simultaneously, the staff will receive formal mentoring from the change leader, so that environmental leadership is modelled for the principal while building capacity and empowering leadership in the staff. The formal mentoring process has been shown to promote professional growth in mentees, and that mentees develop greater awareness, knowledge and self-confidence and respond positively to encouragement and constructive feedback (Collet, 2015; Ehrich, Hansford & Tennent, 2004).

In conjunction with a formal mentoring process for the principal and the staff, open forums to develop strategies to support the newly created goals, and to address openly any questions or concerns of both the principal and the followers (staff), need to be in place. To that end, professional learning communities (PLCs) will be regularly provided during (e.g., *During*

the Change) and subsequent (e.g. *After the Change*) to the environmental change process at HFPS. As discussed in Chapter 2, PLCs have been found to be an effective tool to support organizational change and improvement, and help to change teachers' beliefs and practices conducive to improving student achievement (Jones & Harris, 2014). The change leader will be instrumental in modelling PLCs for the HFPS principal so that conditions are in place to support successful collaboration in creating and aligning teaching strategies to align with the newly developed goals (Jones & Harris, 2014).

An effective tool to use as integral to the PLC is reflection and narrative inquiry (e.g. storytelling). Encouraging both principal and staff to share their reflections through oral and/or written narrative has been shown to help deepen reflections and strengthen teaching practice (Allard et al., 2007). Additionally, sharing of individual professional experiences helps develop trust in both the leader and each other, and builds confidence in the integrity of the leader (Kouzes & Posner, 2012). It is important to note, as well, that the process of storytelling is strongly connected to the precepts of environmental sustainability in indigenous cultures. Indigenous people believe themselves to be the caretakers of the land and that their interconnectedness with the land is the source of their cultural identity, wisdom and knowledge. The land is integral to indigenous beliefs and values, and these beliefs and values are shared and preserved through generations of traditional storytelling (Iseke & Brennus, 2011; Simpson, 2002).

These strategies (i.e., PLCs and narrative inquiry), while being part of the *During the Change* and *After the Change* stages are also embedded in the *Acceleration* and *Institutionalization* stages of the *Change Path Model* (Cawsey et al., 2016), as the change plan is implemented, regularly reviewed, and possibly modified to meet goals.

Supports and resources. As outlined in Chapter 2, both the PLC model and the formal mentoring process require financial support in terms of release time for staff. The amount of time for sessions with the principal, and subsequently with principal and staff may vary; however, it is necessary for the change leader and the HFPS principal to demonstrate that the process, and the participation of staff in the process, are valued by providing the appropriate time to honour them. Using lunch time (e.g., lunch ‘n learn sessions) which is often how regular professional development is delivered to staff, will not send the message to followers that the planning of the new vision and goals is a valued priority. Staff will be more motivated and amenable to the process when they see that it is valued by the leader(s) (Kouzes & Posner, 2012) by providing the staff the release time to engage in the process. As well, as discussed in Chapter 2, a formally trained mentor qualified in environmental education planning needs to be utilized. A mentor with little or no training in either mentoring strategies or environmental education precepts will be detrimental to the process (Stock & Duncan, 2010).

Finally, there are many environmental education resources available in hard copy and/or on line. See Appendix B for a list of possible resources. Many of these resources will provide meaningful curriculum based environmental activities and strategies as well as learning goals and assessment tools.

While these resources will be invaluable supports to the change implementation process, the next section will discuss some possible barriers to address.

Potential Implementation Issues

Some of the barriers to successful implementation of this OIP might include:

1. A lack of appropriately qualified mentor

It is possible that a qualified, trained mentor who also holds environmental education qualifications may not be readily available.

2. School budget restrictions – budget allocations may preclude providing the necessary level of release time that would be recommended so may be a challenge for the principal (Chawla & Flanders Cushing, 2007).
3. Staff and/or Principal resistance - recognizing and addressing the needs of resistant staff members may be a challenge (Stock & Duncan, 2010). It will be important for the transformational change leader to apply his or her skills in nurturing interpersonal relationships to gain the trust of resistant staff (Kouzes & Posner, 2012).
4. Arguably the most critical issue in the implementation of this OIP will be to establish the rationale for a change in vision and goals supporting environmental education. As discussed in Chapter 1, while the GADSB supports environmental teaching and learning, it does not mandate it for individual schools. Because the choice to embrace environmental education is each school principal's decision, it will be necessary to convince the principal and staff that the rationale is supported by the GADSB (GADSB, 2016b) as well as extensive research (Ardoin, et al., 2016; NAEE & Stanford University, 2017). Importantly, the underlying tenets of environmental education and sustainability, equity, and global responsibility can be linked to the GADSB policy document (GADSB, 2016a).

Change Process Monitoring and Evaluation

Once the new vision for environmental education at HFPS has been established, and goals are in place to reflect it, the change process has reached the *Institutionalization* phase

(Cawsey et al., 2016) of the change implementation. It is essential to have a process in place to monitor and assess the impact of the ongoing change initiatives from the outset. The monitoring and evaluation system should be built into the initial planning to ensure ongoing accountability, much in the same way that the Ontario Ministry of Education (2010) *Growing Success* demands that student assessment occurs *for, as, and of* learning, meaning that an effective evaluation and monitoring system needs to be in place to assess the change implementation before, during, and at the end of the process. This strategy will ensure that goals are clarified at the beginning in the *Before the Change* stage, that monitoring throughout the change in the *During the Change* stage can highlight what things are going well and what areas may need to be reviewed and modified in moving forward, and finally, a summative analysis of the change progress in the *After the Change* phase to inform the future direction of the planned change (Cawsey et al. 2016).

As mentioned previously, the monitoring strategies to evaluate the progress of the environmental education program will reflect the expectations for evaluation in *Growing Success* (Ontario Ministry of Education, 2010) in four categories: (a) knowledge and understanding; (b) thinking; (c) communications; and (d) applications (p. 17). Such monitoring strategies may include quantitative assessment tools such as checklists, rubrics, tests, quizzes, project assessment, and report card data, as well as qualitative assessment through observation and anecdotal notes. In terms of teacher implementation of the environmental education program, teachers' long and short term plans and daily lesson plans need to be monitored regularly by the school principal. Most importantly, all stakeholders must participate in a regular review of the self-assessment criteria in the categories outlined in the Ontario EcoSchools Certification Guide (2018) in the areas of *teamwork and leadership, energy conservation, waste minimization, school*

ground greening, curriculum, and environmental stewardship (p. 1). As discussed in Chapter 2, PLCs would be the most ideal strategy to achieve this regular review and self-assessment.

Figure 1 illustrates that the system for monitoring and evaluating the change path is not a linear process with a beginning, middle and end. It must be a constant cycle of monitoring, reflecting that effective change is a process, not a single event (Napier, Amborski, & Pesek, 2017).

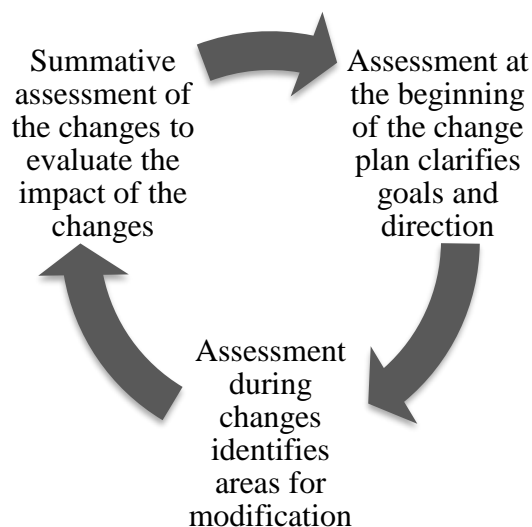


Figure 1. The Monitoring and Evaluation Process. Adapted from Ontario Ministry of Education (2010) *Growing Success*

At the beginning stage of developing an effective system for monitoring and evaluating the change implementation, it is important to ensure that the measuring tools reflect the achievable potential of the goals established in Chapter 2, using the S.M.A.R.T. criteria (i.e., that goals are specific, measurable, achievable, relevant, and time-based) (Doran, 1981). Cawsey et al. (2016) have outlined several criteria to inform the process of establishing an effective monitoring process that reflects the S.M.A.R.T. (Doran, 1981) criteria.

The monitoring tools need to reflect the specific nature of the goals and strategies. Change leaders need to identify specific key areas for assessment, as attempting to evaluate on

too broad a scale will be not only problematic, but largely ineffective, as a global assessment will not provide the specificity of data that is needed to inform the effectiveness and future direction of the changes. The criteria for monitoring the outcomes of specific strategies need to be decided in a group forum such as a PLC as an integral part of the change process and based on the guidelines in both *Growing Success* (Ontario Ministry of Education, 2010) and specifically the parameters for certification outlined in the *Certification Guide* (Ontario EcoSchools, 2018). HFPS teachers need to have a clear understanding of what is expected in terms of both goals and specific key areas for evaluation of progress.

Change recipients must also believe that the established goals are achievable (Cawsey et al., 2016; Kouzes & Posner, 2012; Doran, 1981). For this reason, it is essential that the HFPS teachers are engaged in the complete process of goal-setting, and the monitoring and evaluating process decision making. If the change recipients are invested in the validity of the changes, and believe in the incremental stages to be assessed, they are likely to be more motivated to take ownership and accountability for the effectiveness of the change monitoring and evaluation process. The *Growing Success* document (Ontario Ministry of Education, 2010) states that “ongoing descriptive feedback [needs to be] clear, specific, meaningful, and timely to support improved learning and achievement” (p. 12) and arguably these same criteria can be applied to the monitoring and evaluation of the HFPS change path as its teaching and learning objective is to improve student learning through effective environmental education programming.

Without measurable data for analysis, the effectiveness of the HFPS change plan cannot be objectively assessed. Criteria will need to be established that will provide a quantitative analysis of the specific areas of the goals implemented at each stage of the process. Cawsey et al. (2016) suggest that “measurements that note small steps to the larger goal and measures within

an individual's control will tap into desired motivations" (p. 346). For instance, if the teaching and learning goal at HFPS will be that by the end of Grade 8, students at Happy Fields Public School will acquire knowledge, skills and perspectives that foster understanding of their fundamental connections to each other, to the world around them, and to all living things, then teacher planning and documentation of programming and strategies that will reflect this goal can be monitored and measured quantitatively. Also, the results of student learning and application of environmental precepts will be regularly assessed *for, as, and of learning* (Ontario Ministry of Education, 2010) to provide evaluation data of student progress.

In terms of the proposed environmental education goal #2, (i.e. that Happy Fields Public School will increase student engagement by fostering active participation in environmental projects and building links between schools and communities), this goal provides an ideal opportunity for strategy building and planning as part of the PLC process, where group input can be shared and collaborative planning for implementation and evaluation strategies can occur (Jones & Harris, 2014). This process would be embraced by staff as being "fair and appropriate" (Cawsey et al, 2016) resulting in staff buy-in for the proposed goals, implementation strategies, and monitoring and evaluation measures. Again, the level of implementation of this goal is measurable by both the staff and the principal, as is the resulting level of student achievement.

The implementation of the third proposed goal, (i.e., at Happy Fields Public School, we will build leadership capacity in staff, students and community members in leading environmental education education programming and practices), is also measurable and relevant, particularly to the school community. As previously mentioned, the school community is enthusiastic to begin the journey to environmental awareness at HFPS. Their participation and involvement will positively influence both the culture and climate of the school (Burke &

Litwin, 1992) in the context of pursuing the newly created HFPS vision of environmental education and sustainability. A meaningful strategy to create opportunities for their participation would be to establish an Eco Team in the school, comprising all stakeholders – administration, teachers, support staff (including custodial staff), students, and members of the parent and larger community. Through this school Eco Team, strategies to plan and implement school wide opportunities to promote and encourage environmental leadership can be planned, implemented, and quantitatively assessed.

The most important factor in change implementation is establishing a plan for change, including a plan for the monitoring and evaluation of that change. Cawsey et al. (2016) suggest a 6-step change plan, which is modified here to align with the steps outlined in the HFPS implementation plan in Chapter 2:

1. Establish the rationale for change with supporting data and research
2. Develop a shared vision and goals
3. Work collaboratively with staff in embracing the new vision and the planning of implementation strategies
4. Communicate the plan to all stakeholders using a bottom-up approach
5. Link the school's planned change goals for environmental education to the existing GADSB policies
6. Monitor and assess the changes and adapt to external and internal variables as needed

Although the above points appear to be a linear list, it has been noted in the previous section that the monitoring and evaluation process is a cycle (Figure 3). Another cyclical process that fits well within the Cawsey et al., (2016) *Change Path Model* is the *PDSA Model* (Berwick,

1996; Langley, Nolan & Nolan, 1992) which comprises four steps - *Plan-Do-Study-Act*, allowing for ongoing reflection and modification of change strategies (see Figure 2).

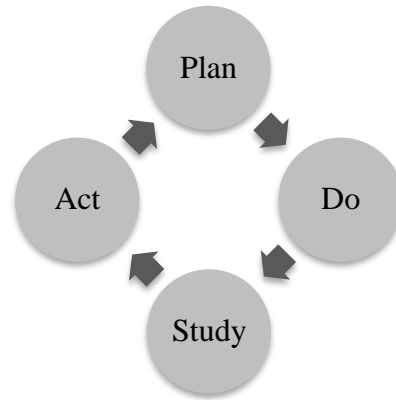


Figure 2. PDSA Model. Adapted from Langley, Nolan, & Nolan (1992)

“The plan-do-study-act (PDSA) cycle describes, in essence, inductive learning—the growth of knowledge through making changes and then reflecting on the consequences of those changes” (Berwick, 1996, p. 623). This basic model developed by Langley, Nolan and Nolan (1993) poses three central questions to guide the change process – what are the goals to be accomplished, how will the improvement through changes be identified, and what changes and modifications can we implement that are conducive to change.

In the *Plan* stage, goals need to be specific, purposeful and relevant to the desired outcome. As previously mentioned, this OIP will use the bottom-up approach to vision creating and goal setting, combined with the transformational leadership approach (Northouse, 2016), wherein the transformational change leader will have a vision in principle of the desired state, and works to inspire followers to embrace it. However, stakeholders are still empowered to provide input to inform the final vision development. As mentioned in the previous section, stakeholders in the planning stage would include administration, teaching staff, support staff,

including caretaking and office staff, parents of the school community, and the students. Some action planning tools that might be used in the planning stage are (Cawsey et al., 2016):

1. A to-do list that incorporates all tasks, listed in priority
2. A responsibility chart – who is responsible for each task, together with a timeline for completion
3. Contingency planning – in the event there is a need to adapt the propose plan to changing circumstances
4. Decision reflection – review decisions and their potential impact;
5. Planning for all possible outcomes and their implications
6. Data collection tools – possible use of surveys
7. Feedback from data collection tools – involve all stakeholders in the discussion of the findings and their implications
8. Task / work scheduling strategies, e.g. project planning and critical path
9. Force field analysis – looking at all the factors involved in the change and the pros and cons of the change
10. Develop a change communication plan
11. Develop a change monitoring and evaluation plan

During the *Do* stage, the plans developed through stakeholder involvement in PLCs and the mentoring process will be initiated and monitored to assess effectiveness in meeting the three established HFPS goals for environmental teaching and learning, student engagement and leadership development. Please refer to Appendix C, D and E for examples of rubrics which might be used as assessment tools as a measure of level of expectations met in the areas of *Teaching and Learning Goals, Student Engagement, and Leadership Development.*

The assessment data acquired during the *Plan* and *Do* stages of this model will provide the basis for the *Study* and *Act* phases of the PDSA model. As previously mentioned, the collected data will be reviewed, discussed, and interpreted incorporating all stakeholders in a PLC format, or if there are beginning to be emergent leaders of environmental education coming forward, PLCs may move towards becoming smaller group meetings with stakeholder leaders.

The PDSA model to be applied in this OIP will be school based, and specific to each task addressing each goal. As Berwick (1996) points out, while measurement is a tool of change, measurement tells us if the change is being successful, or adaptations need to be made. In other words, change cannot occur without a valid measuring and monitoring system in place, including the tools and strategies discussed on the previous page.

Plan to Communicate the Need for Change and the Change Process

The importance of communication as an essential component of the change process and the sustainability of the success of organizational change must be clearly emphasized.

Communication at all phases of the change plan needs to be in place in order to mitigate the possible impact of rumours, to motivate followers to embrace the change, and to ensure continuity of dedication to the implementation of the change (Cawsey et al., 2016). Because communication is vital to bringing about successful change, a formal communication plan needs to be developed, and this communication plan must align with the PoP on which this OIP is based, as well as the change leadership approach, and the change model to be followed. Each of these three factors will be discussed in the context of the four purposes of developing an effective communication plan – the need for the change emphasizing the impending global environmental crisis, persuading others that the change will benefit them, to ensure that changes

in job methodology are shared, and to communicate the monitoring of the progress of the change (Cawsey et al., 2016).

Aligning with the PoP

As discussed in Chapter 1, the PoP for this OIP is grounded in environmental precepts and the challenging issues that are facing our planet and population, for example, climate change, natural disasters, loss of biodiversities, and the impact of fossil fuel use (Furman & Gruenwald, 2004). In order to address these challenges, there needs to be a significant shift in global perception from one of self-interest to one that recognizes the interdependence of nature and humankind (Kensler & Uline, 2017), and such a shift will need to be rooted in the education of the population. Research suggests that schools and school leaders have an important role to play in achieving such a goal (Bowers, 2010; Kensler, 2012; McClam & Diefenbacher, 2015), and that supposition forms the basis for this OIP which will strive to implement a change of focus to support an ethic of environmental sustainability at Happy Fields Public School (HFPS). The initial communication with the stakeholders in this OIP will be crucial and purposeful, as the change leader's vision of, and rationale for, environmental sustainability will need to be shared with, and ultimately embraced by, the school principal, staff, students, school community, and senior administration. Kouzes and Posner (2012) discuss this issue, suggesting that the leader's actions will be the main determinant in followers' and other stakeholders' attitudes and behaviours. At this stage, the change leader will need to effectively achieve the first two goals of the purpose of the change, by conveying knowledge-based passion for the environmental issues, and an understanding of the lenses through which the range of stakeholders will view environmental issues and the need for change in educational programming at HFPS. "You can't command commitment; you have to inspire it. You have to *enlist others in a common vision by*

appealing to shared aspirations” (Kouzes & Posner, 2012, p. 18). In order to achieve such a level of inspiration, the leadership approach employed by the change leader needs to incorporate communication skills that will be conducive to inspiring and motivating followers to embrace the change leader’s vision. An effective communication plan will be integral to reaching this goal.

Leadership Approach

Kouzes and Posner (2012) discuss five practices of exemplary leadership – “*Model the Way, Inspire a Shared Vision, Challenge the Process, Enable Others to Act, and Encourage the Heart*” (p. 29). To achieve success in each of these areas, the change leader in this OIP will adopt a transformational leadership approach, an approach which heavily emphasizes the role of communication in the change process (Kouzes & Posner, 2012). As well, Cawsey et al., (2016) discuss seven strategies that a change leader should use in influencing stakeholders to embrace change, and the first is *education and communication*. A transformational leader recognizes that the change leader’s role is to help followers and other stakeholders understand the rationale for the change, the change format, and the impacts of the change. A key component of this communication, especially initial communication, is transparency (Kouzes & Posner, 2012).

In the context of the first two goals of a successful communication plan (Cawsey et al., 2016), the first two of the five practices of exemplary leaders – *Model the Way* and *Inspire a Shared Vision* (Kouzes & Posner, 2012) – are arguably the most critical component of the communication plan. If this stage of the change process is not successful, it cannot move forward in any meaningful way. As an effective communicator, the transformational leader will engage stakeholders through understanding of others’ perspectives and provide a venue for meaningful discussion and open dialogue. Professional learning communities, one of the strategies employed in this OIP, offer an opportunity for stakeholders to share opinions, concerns and questions. In this format, the transformational leader demonstrates credibility and transparency in responding to input and ensuring there is an understanding by all stakeholders of the rationale, purpose, process, and impact of the proposed environmental education changes at HFPS. Through this process, the transformational leader will build positive relationships with

stakeholders, while also developing mutual trust and respect, important conditions for moving forward with the change plan.

Once trust, respect and positive relationships are established, communication focus can be expanded to address the last two goals of a communication plan (Cawsey et al., 2016). These last two goals are: (a) sharing changes in how things will be done in the context of environmental education programming, and (b) how progress in terms of environmental sustainability level, and student achievement will be measured. These goals can be addressed in an ongoing and circular way through the last three practices of exemplary leadership (Kouzes & Posner, 2012): (a) *Challenge the Process*; (b) *Enable Others to Act*; and (c) *Encourage the Heart*.

Certainly the proposed changes to incorporate environmental education and sustainability initiatives deeply challenge the current process at HFPS. As previously discussed in Chapters 1 and 2, the gap analysis conducted clearly showed that there were virtually no environmentally sustainable processes in place at the school. The primary focus of the transformational leader will be to communicate the need for change in such a way that followers and other stakeholders are convinced and motivated to embark on the proposed changes. In this way, as in all facets of the change journey, the transformational leader has to model the way, especially in terms of communication. In fact, modelling is arguably the strongest form of communication, and has been shown to be an extremely powerful tool in engaging followers (Bowers, 2010; Higgs & McMillan, 2006; Chawla & Flanders Cushing, 2007).

One of the most meaningful aspects of the transformational leadership approach is the empowerment of others. Again, the collaborative nature of the professional learning community strategy embraced in this OIP is highly conducive to building self-confidence in followers, particularly in response to the change leader's encouraging communication and ongoing positive

reinforcement. This type of reinforcing communication needs to be in place throughout the entire change process, which as previously shown, is a circular, not a linear process.

Of course, the achievements of followers at all steps need to be recognized and reinforced, in order for the open communication, trust and commitment to the change plan to not only continue, but to grow as well (Cawsey et al., 2016). Recognition of individual effort is a powerful motivator and a significant part of the role of the transformational leader (Kouzes & Posner, 2012). However, the recognition must be shown to be an authentic act of caring and celebration, and needs to be closely linked with the new vision of environmental education and sustainability being implemented at HFPS.

Change Model

As discussed in Chapter 2, this OIP will use the four stage *Change Path Model* (Cawsey et al., 2016) and it is clear in studying this model that communication is a vital component of each stage. In the first stage *Awakening*, the first two communication change goals (Cawsey et al., 2016) articulation of the need for, and purpose of, the proposed environmental changes are clearly conveyed, as is the vision for change.

In the second stage of the *Change Path Model*, *Mobilization* (Cawsey et al., 2016), communication is noted as the tool to “manage change recipients” (p. 145) as they move through the change process. This is an important aspect of communication – efforts and achievements will need to be recognized and reinforced as mentioned previously in order to sustain enthusiasm and commitment to the vision and change plan.

This model continues with the third stage *Acceleration* which continues and expands on the strategies in the second stage and the final stage *Institutionalization* is a consolidation stage, where communication about the monitoring and assessment of the change initiatives needs to be

ongoing and multi-faceted. It is important that a range of communication methods is used so that all stakeholders and followers are engaged in an ongoing way, and hear the same messages from a variety of sources. The transformational change leader will be highly engaged in following the communication plan and strategies at each stage of the *Change Path Model* (Cawsey et al., 2016).

Communication Plan

This OIP will incorporate the *Four Phases of a Communication Plan* (Cawsey et al., 2016) into the development of the HFPS communication plan. Table 1 illustrates the 4 phases and the corresponding communication needs for each stage.

Table 1.

Communication Needs for Different Phases in the Change Process

Pre-change Phase	Developing the Need For Change Phase	Midstream Change Phase	Confirming the Change Phase
<p>Communication plans to sell top management</p> <p>Emphasize the urgency of addressing the global crisis in environmental sustainability</p>	<p>Communication plans to explain the need for change, provide a rationale, reassure employees, and clarify the steps in the change process</p> <p>Continue to emphasize the urgency of action to address global environmental concerns,.</p>	<p>Communication plans to inform people of progress and to obtain feedback on attitudes and issues, to challenge any misconceptions, and to clarify new organizational roles, structures, systems</p>	<p>Communication plans to inform employees of the success, to celebrate the change, and to prepare the organization for the next change</p>

Note: adapted from Klein (1996)

Pre-change phase. While the first phase typically targets senior management, this will not necessarily be required with this OIP as the GADSB supports environmental education and sustainability initiatives (GADSB, 2016b). However, the change leader must lobby senior

management and program decision-makers to support the school / principal environmental mentoring program, not the concept of environmental sustainability. Arguably, this can be most readily achieved through demonstrating the researched connection (Ardoin et al., 2016) between environmental education programs and the board's goals for increased student achievement, well-being and equity (GADSB, 2016a). As discussed in Chapter 1, while this OIP is built on a topic which incorporates liberal tenets, it also must be implemented within a structural framework that values student achievement. Therefore, providing data that environmental education programming enhances student achievement will be important.

The change leader for this OIP will be the environmental mentor and during the pre-change phase the mentor will need to not only seek approval from senior management to implement a principal environmental mentoring program, but also to reach individual principals who are not engaged in environmental initiatives at their schools. It is important to stress, and support with data, the urgency of addressing the impending global environmental crisis through individual school programs. Once board approval has been received, the more difficult task will be that of engaging the HFPS school principal, as the principals in the GADSB have discretion authority to decline to participate in environmental programming.

Developing the need for change phase. The principal mentor / change leader must develop a clear communication plan to convey to the school principal a highly persuasive rationale for change, stressing the urgency of the global environmental crisis, and also must be able to view the issue from the lens of the principal. One issue the principal might have is the presumption that environmental initiatives detract from the core learning subjects, for example, language and mathematics. The mentor / change leader must present the argument for the advantage of environmental education to student achievement in such a way as to value the

principal's concerns while at the same time presenting sound rationale for the benefits. Extensive research shows that environmental education initiatives have a positive impact on students' overall achievement (Ardoin, Bowers, Roth, & Holthuis, 2016; Kensler & Uline, 2017). Another issue the principal might raise is the need for training and the possible financial considerations of releasing staff to participate in the process. The future of the implementation of this change process at HFPS rests with the advocating and leadership skills of the mentor / change leader in collaborating with the principal to resolve the presenting issues. Once the principal is committed to engaging in the plan, the mentor / change leader needs to engage all stakeholders, including parent community, members of School Council, staff and students, to present the rationale for initiating environmental education programs at HFPS.

Midstream change phase. As the change process gets underway, and as it progresses, a communication plan to convey results, progress, changes, and opportunities to revisit the plan based on findings as the plan is implemented. The PLC members as discussed in Chapter 2 will be key participants in the communication plan. Facilitated by the principal / mentor, and gradually by the school principal, the PLCs will need to convene regularly, especially during this midstream change phase, to share and review the progress of the plan implementation, and communicate results. As previously discussed, stakeholders need to know how well they are doing in implementing the changes, what impact the changes are having on the school in terms of raised environmental awareness, and what impact the new initiatives are having on student achievement. This is the stage where extensive communication through a range of media is extremely important. Posting photos and information on bulletin boards, including information in school newsletters, electronic communication and school assemblies are all good suggestions to ensure information is ongoing and varied. Celebrations of all steps of achievement are

necessary to raise awareness for all the stakeholders, including senior administration, of the success of initiatives, and to motivate teachers, support staff, students and the principal to continue with the plan. This is the phase also where opportunities should be in place to encourage and empower staff to come forward to assume leadership responsibilities (Cawsey et al., 2016; Kouzes & Posner, 2012). Success in informal leadership roles is highly reinforcing and motivating, raises self-awareness and self-confidence, and encourages followers to reach for, and exceed, challenges (Kouzes & Posner, 2012; Cawsey et al., 2016).

Confirming the change phase. In this phase, the continuation of feedback and celebrations of success are very important to the sustainability of the change initiatives. While these four stages of change may appear linear, the change leader needs to be flexible in accommodating followers moving back and forth between the *pre-change phase, developing the need for change phase, midstream phase*, and the *confirming the change phase*. The importance of regular collaboration during this phase must be clearly emphasized. This collaboration can take the form of PLCs, if needed, or smaller group meetings to share successes, observations and suggestions for possible modifications to the plan. Ongoing communication to stakeholders will also be particularly important so that they are consistently informed, thus engaged. As well, celebrating the successes along the change journey increases self-confidence in followers and enhances motivation and commitment (Kouzes & Posner, 2012), especially when individual efforts and accomplishments are recognized.

Conclusion – Next Steps and Further Considerations

This OIP pursues the challenge of implementing non mandated environmental education and sustainability programs in an Ontario public elementary school which currently does not embrace the value of environmental education as a component of student achievement. The

rationale for incorporating environmental education into existing school curriculum is well researched and documented (Buckler & Creech, 2014; Kensler & Uline, 2017.) The threats to our environment and our planet are increasing at a rapid pace. Some of these threats include climate change, biodiversity loss, fossil fuel use and single use plastics (Furman & Gruenwald, 2004; Kensler & Uline, 2017). Because these threats are largely influenced by our individual choices, Kensler and Uline (2017) suggest that addressing these issues will require a significant shift in our thinking from ego centric to a more environmentally interdependent perspective, and that schools are the ideal arena in which to work towards achieving this shift in thinking.

Extensive research has shown that purposeful environmental education programming raises the levels of student achievement and engagement, as well as providing an equitable learning platform for all ages and abilities. Ardoin, Bowers, Roth, and Holthuis, (2016) conducted a Stanford University critical analysis of 119 peer reviewed environmental education studies published from 1994 - 2013 to determine the validity of the research in terms of the impact of environmental education programs for K – 12 students. The research revealed that environmental education has shown to have many positive impacts in a range of educational areas, for example, improving environmental attitudes, awareness and behaviours, and importantly enhancing academic performance, including critical thinking skills. These studies also concluded that environmental education is conducive to students' personal growth and to building fundamental life skills such as confidence, autonomy, and leadership. Clearly the research supports that environmental education is beneficial to students' academic achievement and social and emotional growth, while gaining environmental knowledge and awareness, and becoming global citizens, thus supporting the suggestion (Kensler & Uline, 2017) that the school is the ideal

venue to plant the seeds of environmental knowledge, practices and shift the perspective from individual to global responsibility.

The primary barrier to the success of this change process, or shift in thinking, is the dichotomy that exists in the GADSB, wherein organizational environmental policies support and encourage environmental programs in schools (GADSB, 2016b), but student achievement and curriculum documents do not specifically mandate schools to initiate them (GADSB, 2016a). Therefore, school principals have the discretionary power to decide against including an environmental focus in their schools.

The environmental mentoring program for principals may be seen as a way to address this challenge, one school at a time, but relies heavily on the advocating and transformational leadership skills of the mentor to positively influence the decision of the principal. As well, as the mentor / change leader entering into a mentoring relationship with the school principal, I must guard against the appearance of a bias in favour of environmental education to the extent that the school principal's views are not taken into consideration. One of the underpinnings of transformational leadership is collaborative, transparent dialogue which considers the lens through which the school principal is viewing the issues. As an environmental specialist and advocate, professional bias has the potential to be a considerable challenge to overcome. However, an essential component of the change plan for this OIP will be to use my skills and collaborative approach as an experienced mentor principal and transformational leader to mitigate that potential bias and to create a trusting relationship with the HFPS principal.

Another issue to consider is the board's willingness to continue the principal mentoring program for future years. Such a program would be a year-to-year organizational decision, based on the consideration of many factors, including the availability of formally trained mentors with

credentials in environmental education. The board may also consider the viability of having only one mentor / change leader and the cost of assigning more mentors to this project, providing they are available. The board would also have to consider environmental advocacy groups and how significant and influential that particular group might be compared to other special interest advocacy groups (Bolman & Deal, 2013). It is possible that environmental advocacy groups might ultimately have the power to influence the organization to mandate environmental programs in every school. While this would not necessarily eliminate the need for the environmental mentoring program, it would change the possibility that the school principal might decline to participate. In that case, mentoring would still be a necessary component of the school's change process.

However, since at present schools are not mandated to engage in environmental education programs, several school-based issues may materialize. As discussed in the previous section, the question of whether environmental programs detract from core learning is the primary factor for many stakeholders. As the mentor / change agent I must be prepared to respond to this concern and be knowledgeable and compelling about the current research in this area, and as discussed earlier, there is considerable research to support the school's decision to move forward with environmental education programming in the school (Ardoin et al, 2016; Kensler & Uline, 2017). As well, research needs to be presented with consideration of the levels of knowledge and experience of the target audience – communication needs to be professional but not so formal as to disengage the audience. Introductory activities should be used to motivate and inspire the followers while at the same time increasing their level of ecoliteracy (Golman et al., 2012).

Another question that regularly arises is the need for staff and principal environmental education professional development (PD), and the cost of not only the PD, but also the cost of releasing staff to participate in the process. As discussed in Chapter 2, the strategies employed in this OIP are formal principal (and staff) mentoring, as well as professional learning communities (PLCs). It is essential that the opportunity for a high level of participation be provided, and as discussed in Chapter 2, there is a financial cost attached to teacher release time, and this issue would need to be addressed through collaborative and creative problem solving at the school level.

The potential for teacher resistance is another possibility. However, the principal does set the tone for the school (Kouzes & Posner, 2012; Sharraat & Fullan, 2009) and her modelling of professional behaviour would be conducive to followers' engagement (Kouzes & Posner, 2012). In the case of resistant followers, it is important for the change leader to continue to support the principal and engage followers through collaborative discussion in PLCs, and establishing a set of mutually agreed on norms for professional and productive participation, as well as engaging initial exercises to ensure everyone has the opportunity to be heard (Goleman, Bennett & Barlow, 2012).

In conclusion, although the mentoring strategy incorporated in this OIP does present with possible barriers, the gains to be made in environmental awareness and practice, as well as the potential for increased student engagement and achievement make this OIP a meaningful and worthwhile implementation.

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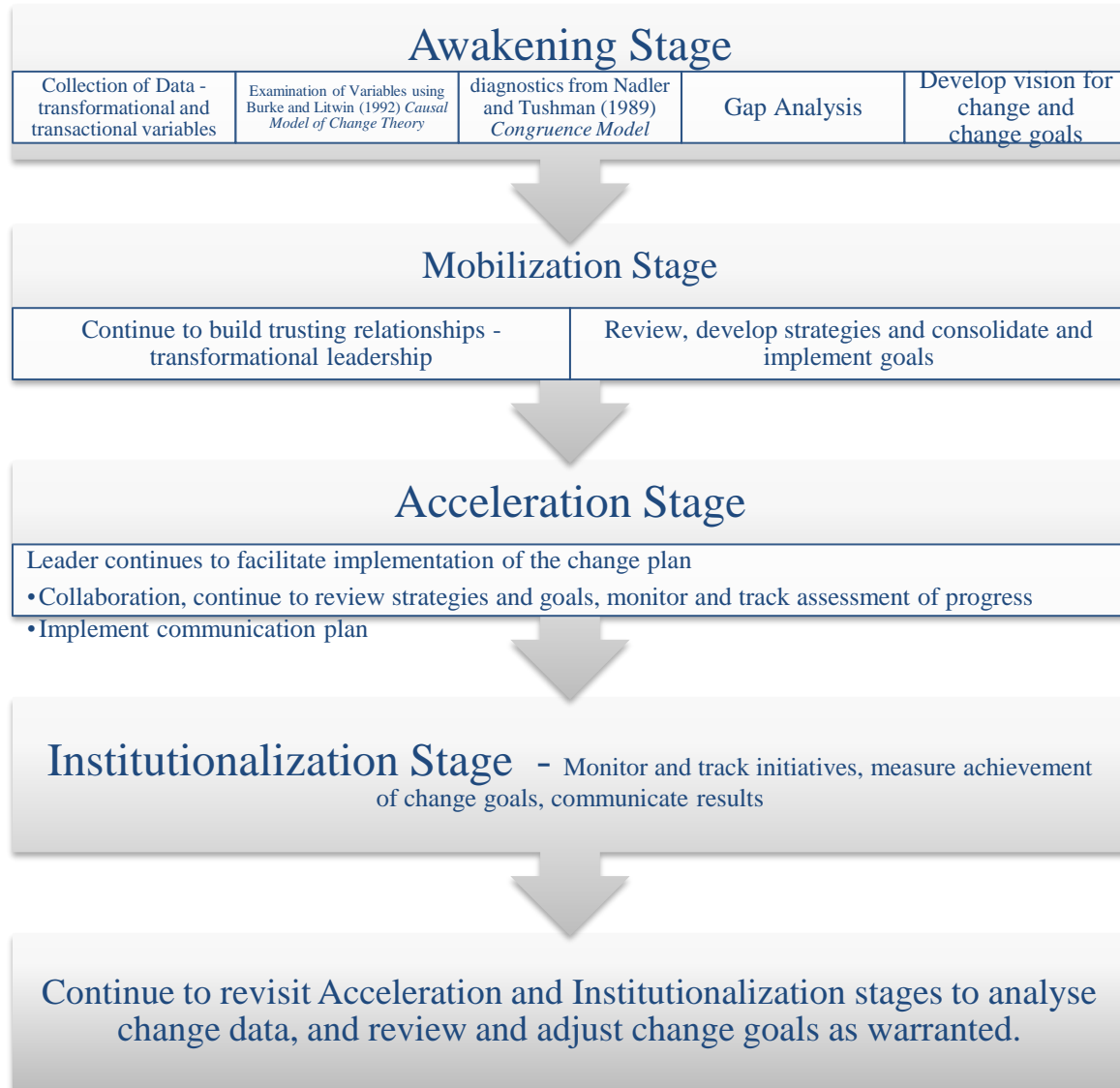
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Appendix A

Cawsey, Descza, and Ingols (2016) *Change Path Model Stages Incorporating*
 Burke and Litwin's (1992) *Causal Model* and the Nadler and Tushman (1986) *Congruence*
Diagnostic Model



Adapted from Cawsey, Descza, and Ingols (2016), Burke and Litwin (1992), and Nadler and Tushman (1986)

Appendix B

Environmental Education Resources

- Goleman, D., Bennett, L., & Barlow, Z. (2012). *Eco literate: How educators are cultivating emotional, social, and ecological intelligence*. Francisco, CA: Jossey-Bass
- Kensler, L. A. W., & Uline, C. L. (2017). *Leadership for green schools: Sustainability for our children, our communities, and our planet*. New York, NY: Routledge.
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Appendix C

Sample Rubric for Goal #1 – Teaching and Learning

By the end of Grade 8 students [at Happy Fields Public School] will acquire knowledge, skills and perspectives that foster understanding of their fundamental connections to each other, to the world around them, and to all living things.

Expectations	Level 1 Beginning	Level 2 Emerging	Level 3 Competent	Level 4 Proficient
Teacher will provide opportunities for students to acquire knowledge and skills related to environmental education in all subject areas, and encourage them to apply their knowledge and skills to environmental issues	Student asks questions that demonstrate curiosity about the world around him or her	Student asks questions that could lead to investigations and chooses one that will be the basis for an investigation	Student asks questions that could lead to investigations and formulates a specific question that will be the basis for an investigation	Student asks questions that arise from practical problems and issues and formulates a specific question that will be the basis for an investigation
Teacher will develop learning opportunities that will help students understand the underlying causes, the multiple dimensions, and the dynamic nature environmental issues	Student asks questions that demonstrate curiosity about the world around him or her	Student asks questions through tests/experimentation and chooses one to investigate	Student asks questions that can be answered through tests/experimentation and formulates a specific plan to investigate	Student asks questions that arise from practical observation and experimentation and formulates a specific question to investigate

Adapted from Ontario Ministry of Education (2009), and Ontario Ministry of Education (2007).

Appendix D

Sample Rubric for Goal #2 – Student Engagement and Community Connections

[Happy Fields Public School] will increase student engagement by fostering active participation in environmental projects and building links between schools and communities.

Expectations	Level 1 Beginning	Level 2 Emerging	Level 3 Competent	Level 4 Proficient
Teacher will increase student engagement by fostering active participation in environmental projects and building links between schools and communities	Awareness that the whole school needs to recognize local community, national and global environmental sustainability issues	There is occasional whole school recognition of local community, national and global environmental issues and limited opportunities to address them	There is frequent recognition of local community, national and global environmental issues and some purposeful, planned projects to address them	All members of the school have the capacity to think globally and act locally in the community and in the school, and to plan and implement meaningful projects to address them

Adapted from Ontario Ministry of Education (2009), and Eames (2009).

Appendix E

Sample Rubric for Goal #3 – Environmental Leadership

At Happy Fields Public School, we will build leadership capacity in staff, students, and community members in leading environmental education programming and practices.

Expectations	Level 1 Beginning	Level 2 Emerging	Level 3 Competent	Level 4 Proficient
Engage student leaders in the design and delivery of environmental education at the school level	Awareness that use of effective environmental education programming to develop students' leadership and competence in sustainability is desirable	Effective programming is being used to somewhat develop students' leadership and competence in environmental sustainability.	Effective programming is being used to capably develop students' leadership and competence in environmental sustainability.	Effective programming is being used school wide to proficiently develop students' leadership and competence in environmental sustainability.

Adapted from Ontario Ministry of Education (2009), and Eames (2009).

