
Leading sustainable quality in organisations: Insights from the pandemic

Prof. Kristen M. Snyder¹ & Prof. Karolyn J. Snyder,

²*Dr. Kristen M. Snyder, Mid Sweden University, Sweden. kristen.snyder@miun.se*

¹*Dr. Karolyn J. Snyder, University of South Florida, USA. karolyn@karolynsnyder.com*

Abstract

In this paper, a qualitative case study is presented of how a private school in Florida, USA developed innovative responses to the Covid-19 pandemic, while maintaining and sustaining quality, within the school and in relation to global sustainable development goals. The analysis examines the school's leadership, and how strategic decision making, shared leadership, teaming and collaboration, and the school's core values and organizational culture were used to adapt and respond to the crisis. Findings from this case study provide insights to better understand how leaders can develop adaptive systems, built on quality management principles, and to foster sustainable practices that are value-based and customer oriented within the Quality 5.0 era. The paper connects to the track's focus to illustrate and discuss how quality management practices can be used to support sustainable development on the organizational level through adaptability and innovation.

Keywords: Leadership, Networks, Agile, Sustainable, Quality

1. Introduction

How leaders respond to a pandemic without sacrificing quality is an indication of how sustainable and adaptable is the organization. This past year has opened doors for researchers to examine from the front-line the practices and strategies that leaders use to re-design and innovate services to meet the emerging needs of their customers. This opportunity comes at historical cross-roads in which businesses and organizations are challenged to find ways to meet among other things the UN Agenda on Sustainable Development (Cole, 2003; Hawkins & James, 2018; Mårtensson, et al. 2019). Fundin et al. (2020) identified a need for more research in this area to understand what and how leaders can bridge the gap between traditional views of quality management and organisational development and the need for adaptive, participatory work cultures.

Researchers in quality management and organizational design suggest there is a paradigm conflict between current business forms that are used, based on models from the 20th century and what is needed for meeting the complex demands of society today (Fundin, et al, 2019; Van Kemenade and Hardjono, 2019). Among the questions to consider include, what does sustainability mean for quality management? Should the focus be on sustainable systems? or on the ways in which organizations and business can contribute to securing a sustainable future society? Many now suggest that the answer is, both (Deleryd & Fundin, 2020; Halinen, 2017; Mårtensson, 2019; Snyder, 2021). Among the changes required to meet this complexity will be a different kind of organisational infrastructure that promotes adaptability and responsiveness (Rill, 2016; Rigby, et. al, 2020; Saurez & Montes, 2020; Tensil, 2021) and a new mindset (Rill, 2016; Sanders, 2010). One of the biggest challenges for leaders today is how to “position and enable organizations and people for adaptability in the face of increasingly dynamic and demanding environments”, (Uhl-Bien and Arena, 2018, p. 1). Kim and Mauborgne (2015) argue that the organization itself is no longer the unit of analysis, but rather, it is the strategic moves, with managerial actions and decisions involved in making moves, that determines how well an organization adapts continuously to rapid and complex change.

When the Covid -19 pandemic hit Florida in March 2020, Corbett Preparatory School of IDS (CPS), like all other schools around the world was faced with the basic question: *How can schooling continue?* This question was critical, not only in the immediate, but also for the future sustainability of society, in which education is vital. Schooling in the 21st century is necessarily linked to the problems and opportunities we face today, and to each community and nation’s future and its role in the global community (Halinen, 2017; UN Agenda 2030). Sustainability for the future, then, is the challenge for every family, agency, business, and community, requiring all systems to become more integrated and interdependent than ever (Snyder, 2019).

Based on a long-term professional relationship to the school, we began to follow the school as a case-study. Of interest was to understand how leaders create strong internal systems of work that are based

on interdependent functions connected around a common purpose and set of values. During the first phase of the pandemic in 2020, CPS remained open as a virtual school, following the same weekly schedule as on-campus schooling. While successful as a short-term solution, in hindsight leaders and teachers realized this organisational learning model was not sustainable in the long run. If the school campus was to open in the fall, learning needed to be reimagined to retain the school's core values of a safe and nurturing environment for everyone, and to insure the continuing of education for society.

The purpose of this paper is to explore and understand how leaders can develop organisational work cultures based on quality management practice that foster the growth and sustainability of organisational practice toward achieving the U.N. Sustainable Development goals, especially # 4, 9, and 16. In the first section of the paper we examine research and theory from systems thinking, chaos and complexity theories, and their application to organisational development. In the second section, we present a qualitative case study to examine how a private school in Florida, USA developed innovative responses to the pandemic, while maintaining and sustaining quality at the organizational and classroom levels. Specifically, we examined the leadership of the school, and how the role that strategic decision making, shared leadership, teaming and collaboration, and the schools core values and organizational work systems and culture were used to adapt and respond to crisis. Through this case study we aim to share insights into the connection between quality management and sustainability that can be used to strengthen leadership for sustainability in complex and turbulent times. This case serves to address the need for further research on leadership in the emergence paradigm and Quality 5.0 to integrate sustainable development and quality management.

2. Background

2.2 Leading organisations in complex times: the need for a mind-shift

The global imperative to address sustainable development is pressing organizational leaders, both public and private, to re-examine internal practices to align systems of work with values that promote sustainable development (Cole, 2003; Hawkins & James, 2018; Mårtensson, et al. 2019). New organizational systems need to meet customer needs, while being grounded and stable for building the kinds of healthy work environments that invite innovation and creativity to support sustainable development (Bäckström, et al., 2018; Stegall, 2006; Uhl-Bien and Arena 2018). With the growing recognition that society is now considered a customer (Deleryd & Fundin, 2020), the internal work systems, routines and practices will necessarily need to integrate and link with sustainable societal development goals (Mårtensson, et al. 2019).

Current research in quality management suggests that we are now in a new era, called Quality 5.0, in which sustainability is a key component of quality, expanding the notion of customer to include society (Deleryd & Fundin, 2020). This perspective expands how we think about the inter-relationship between sustainable organisational development and sustainable societal development (Deleryd & Fundin, 2020;

Ramanathan, 2021). We are now entering a fourth paradigm in Quality management, the Emergence Paradigm, which builds on systems thinking and self-organising principles, and relates to complex adaptive systems. Van Kemenade and Hardjono (2019) state that, “The emergence paradigm defines quality in a dialogue of all stakeholders...knowing quality can be different tomorrow” (p. 160). Among the characteristics, quality is seen as dynamic, not static, based on shared values, flexible, adaptable, dialog and communication oriented, participatory, shared leadership, strategic and systems oriented (ibid).

In recent issues of the *Harvard Business Review* both scholars and CEOs share perspectives on current management practice, which connects with the features of contemporary Quality Management. For example, in a consumer goods company the CEO creates agility within the organization through leadership teams, which in time generated the *Agile Leadership Manifesto* to include the following features: 1) individuals and interactions are the focus, rather than processes and tools, 2) customer engagement is the focus, rather than contracts, 3) working solutions are the focus rather than excessive documentation, and 4) flexibility is the emphasis, rather than concrete plans. Agility is ramped up everywhere by adding more and more teams (Rigby, et. al, 2020). Gulate (2018) promoted the use of frameworks in his research with Netflix, Alaska Airlines, Warby Parker start-up, and Nokia, noting a constant infusion of energy. In contemporary times, agility of organizational teams has become a new focus while people are engaged in continuous adaptation and invention, assuming responsibility for the overarching purpose of the company.

Creating the conditions for organizational transformation within complex systems, which are governed by deep cultural traditions and values, may require leaders to think beyond *the box*. Rill (2016) refers to this as strategic innovation, citing Markides (1997), who calls this “a strategy of breaking the rules” (p. 1136 in Rills, 2016). Achieving this mind shift will require leaders to move from Linear/static thinking with separate functions, to random/dynamic thinking, in which functions are seen as interrelated and systemic (Sanders, 2010). This has implications for both organizational structure as well as the organisation’s culture (Chatman & Eunyoung. 2003; Schein, 2004; Snyder, et al. 2018). Traditional structures of the 20th century will not suffice (van Kemenade & Hardjono, 2018). Suarez and Montes (2020) hypothesis that building organizational resilience requires organizational routines and simple rules, which combined with improvisation are the key ingredients for resilience, suggesting the balance between structure and culture is paramount.

Snyder, et al. (2018) found that many organizational leaders struggle to understand how to balance structure with culture to create the conditions necessary to sustain quality development in an age of complexity. All too often, focus is given to structure and policy, ignoring the power and importance of people, values, and behaviours as key ingredients for sustainable organizational development. They also found that leaders who understand the importance of connecting structure and culture have stronger internal systems that are adaptive and responsive to change; a finding that is also supported by Ingelsson

(2013) and Park-Dahlgaard and Dahlgaard (2003) in their work about generating high performance quality organizations. If organisational leaders are going to be successful moving outside the box, they can benefit from understanding the inter-relationship between culture and structure (Ingelsson, 2013 Snyder, et al., 2018).

Of interest to consider then is: What knowledge do leaders need to break the rules and still meet customer needs while remaining accountable? Important insights are contained within chaos and complexity theory, as well as systems theory (Snyder, et al. (2008) and others (Rigby, 2021; Sanders, 2010; Tensil, 2021). A systems approach is a shift toward a multidisciplinary strategy for development, is relationship-oriented, embraces mapping possibilities rather than evaluation systems, and measures success in quality, values, and process. Systems thinking can alter how we think about change and building sustainable school programs and services (Shaked & Schechter, 2017). Developing an understanding of these theories and their application in organisations provides leaders with tools for a necessary mind shift for addressing sustainable global development through organisational practice.

2.2 Leading organisations in complex times: lessons from the sciences

In our work with educational leaders over the last five decades (Snyder & Anderson, 1986; Snyder et al, 2000; 2008), we focused on the school as a living dynamic system with the integration of work functions around the core purpose of student success for sustainable futures. Quality practices become strategies for addressing the changing and complex needs of students, communities, and society as a whole. Drawing knowledge and insights from the sciences, we developed a model for leading sustainable school development (Snyder et al., 2008), which has been modified somewhat over the years, and integrates components of quality management, quantum physics, and sustainable development practice. This model is in line with the principles found in Quality 5.0 (Deleryd & Fundin, 2020) and the emergence paradigm (Fundin, et al, 2021; van Kemenade & Hardjono, 2019), which articulates the need for organisations to integrate sustainable development goals as a part of quality management.

The Chaos Theory of Change (Snyder, et al. 2008) addresses the dynamic of change over time, which is based on theoretical principles from *system thinking* (Bertalanfy, 1968; Capra & Luigi, 2016), *chaos and complexity theories* (Buchanan, 2002; Gleick, 1987; Kaufman, 1995; Prigogine, 1990) and *networking science* (Barabasi, 2003 Watts, 2003). A Systems view of life creates the mindset that everyone is working together toward a common purpose (Capra & Luigi, 2016). It reflects a shift toward a multidisciplinary strategy for development, that is relationship oriented, embraces mapping possibilities rather than evaluation systems, and measures success in quality, values, and process.

Systems-thinking naturally leads to greater complexity, which strengthens a system's cohesiveness and resilience (Buchanan, 2002). As complex systems grow more complex; they never reverse and become simple again, but rather grow in a non-linear fashion, and move quickly (Kaufman, 1995). Surprise

becomes routine from the multidimensional life that exists within a system with a non-linear set of rules, with energy systems of cohesive connections (Holland, 1995). Highly developed complex systems, and networks of systems, easily adapt to changing conditions (ibid). A dynamic network of many agents works in parallel, constantly acting and reacting to what other agents are doing and learning (Barabasi, 2003). Control is decentralized as agents continuously learn from each other and the environment about change and possibilities. Rules change continuously in the adaptation process as agents learn, respond to, and pursue their system's sustainability.

The Chaos Theory of Change (figure 1) includes six main stages: 1) Growing systems respond to environmental changes; 2) Disequilibrium promotes change; 3) Energy builds through connections, 4) Natural systems self-organize, 5) New systems evolve from complete prototypes, and 6) Change is a dance of life and death.

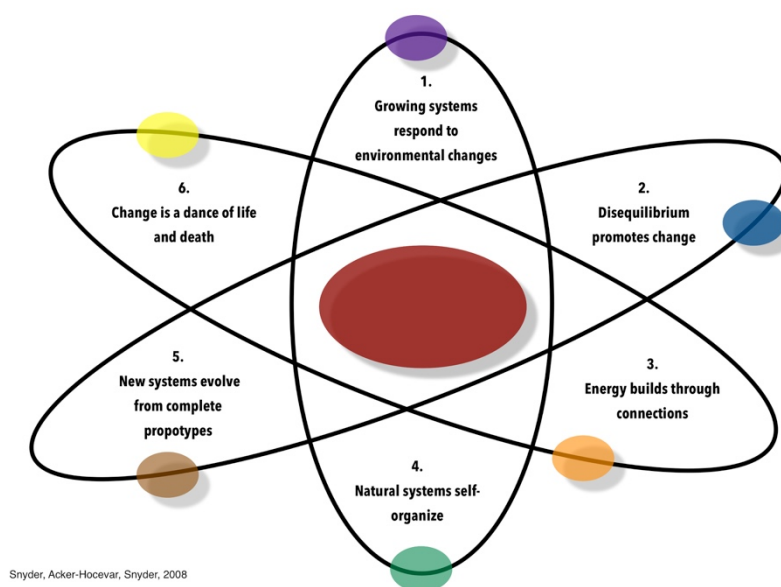


Figure 1: The Chaos Theory of Change model. Snyder, et al. 2008

The first lesson suggests that external forces impact human organisations, which are numerous and complex, and only increase over time in their complexity. The leadership function is to acknowledge both internal and external paradoxes and to become an influence on the external environment as well as the organisation's responses to changing conditions. *The second lesson* suggests that disequilibrium, rather than stability, stimulates the system to respond in the most dynamic, fundamental and sustainable ways. The leadership task is to use information to stimulate disequilibrium, which provides the energy and focus for change. From the *third lesson* we understand that the stronger the web of interactions, the stronger the forces and human energy for change. The leadership function is to develop professional capacities, partnerships and networks to respond to emerging challenges in the system. The *fourth*

lesson teaches us that natural systems have a strong capacity to respond to both external and internal forces, to self-organize, and to become self-determining. The leadership function is to respond to and develop the organisations internal readiness to adapt to changing conditions. In the *fifth lesson*, we understand that building prototypes eventually leads to total systems that are composed of multiples of those prototypes. The leadership task is to sponsor development of completely new forms; the system of services and practices is transformed. In the *sixth, and final lesson*, we learn that the process of creation and destruction is the cosmic dance in natural systems, whereby energy patterns are dissolved and rearranged to fit emerging conditions. From this perspective, the leadership task is to promote both the end and the beginning of work systems, structures, and services.

For sustainability to continue, there needs to be a balance between disorganized and organized complexity, where variations no longer cancel one another out, but rather become reinforcing (Miller & Page, 2007). In complex adaptive systems the following characteristics are found naturally: a variety of networks, continuous interactions, self-organizing, interconnections, emergence, dynamic, co-evolution. Some leaders identify sustainability strategies, and begin to map sustainability issues while working with cross divisional teams, outside consultants, and external stakeholders. They are finding that sustainability strategies improve performance, innovation, customer loyalty, media coverage, and stakeholder engagement (Tensil, et al, 2021). Leaders shift their roles during a transition from a directive role to one of support and mentoring (Rigby, 2018). Building an agile enterprise means finding the right balance between standardizing operations and pursuing innovation. As Suarez and Montes (2020) point out adaptability also requires routine and structure; it is in the balance between the two that complexity can thrive and serve as a catalyst for innovation and change (Snyder, et al. 2008).

In the next section we present findings from a qualitative case study to examine how application of these lessons from the sciences positions an organisation to be responsive and adaptive in a pandemic, while at the same time maintaining its core values and meeting customer needs, including students, parents, community and society.

3. Methods

A qualitative single-site case study was conducted of a private school in Florida, USA to describe and examine the leadership of the school during a pandemic, and how the role of strategic decision making, shared leadership, teaming and collaboration, and the school's core values and organizational culture were used to adapt and respond to the crisis. This school was selected based on a convenience sample given the long-term professional relationship between the researchers and the school. Qualitative research is often based on building relationships with key informants, and gaining access to the case site. Given this, we chose to benefit from our relationship to the school which gave us immediate access. In so doing, we recognize that the findings are not necessarily generalizable. However, research on

quality management in the emergent paradigm needs good examples from which to begin developing knowledge.

3.1 Data Collection

Data were gathered through interviews, observations, focus groups, document analysis, and net-based social communication through the school's Facebook page. Two interviews were conducted with the Head of the school and Deputy Head to describe and examine the challenges, decisions, and strategic planning used in adapting to the pandemic. Interview questions were provided prior to the interviews via email, and the interviews were conducted by the first author through Zoom.

Two focus groups were conducted via zoom with four teachers in the school. Two of the teachers, were also program coordinators in the middle school, and two teachers represented the primary grades. Focus groups were conducted by both authors to examine the impact of the pandemic on the school's programming at the classroom and middle leadership levels.

Document analysis was conducted of the school's newly formed strategic plan in response to the pandemic, and other documents reflecting core values and organisational design. Additionally, we were able to observe the direct result of strategic planning through videos and Facebook postings that were managed by the school administration.

3.2 Ethical considerations

Permission to conduct this study was given by the leadership of the school, including the Board of Trustees. Access to key informants was established through the leadership team, and consent to participate in the study was secured prior to interviews.

3.3 The Case

CPS is a private school in Tampa, Florida USA with about 520 students, pre-K through middle school, which recently celebrated its 50th anniversary. Members of the student body and teaching faculty are international, bringing global perspectives to school learning. The professional staff and students are organized into learning communities, with many additional special programs that are offered during the school day, evenings, weekends, and summers to accelerate learning. The curriculum is guided by the International Baccalaureate Program, and the *More Options for Results in Education Program (M.O.R.E. Approach)*, which encourages brain-friendly learning and social/emotional development. In addition, the International School Connection's *Global Learning Benchmarks*, integrates the UN Sustainability Goals with core curricula and pedagogical practice to provide a continuous global orientation to learning.

The professional staff participates weekly in workshops at the school, while small groups and individuals also engage in a variety of other programs to advance their own knowledge and strategically strengthen the school's performance. State, National and international student, staff, and team awards

are common, as is the recognition of the school as a unit. The previous Headmaster, led the school's continuous development for 25 years, promoting continuous development as a strategic component of the school. Over the years she developed the *M.O.R.E. Approach* (Cohen, 2003) that reflects a variety of theoretical, practical and value-based practices to support both curriculum and pedagogical development in the school as well as a culture for social and emotional well-being. Her leadership is based on Systems Thinking, Quality Management, and Chaos Theory, as conceptual guideposts to support organizational sustainability, continuous improvement, and customer satisfaction.

In this purpose-driven organization (Quinn & Thakor, 2018), workers take on new chores and challenges in response to emerging demands of the growing system. The phenomenon is clearly a network of growing clusters of initiatives, through which new kinds of leadership roles emerge to meet current needs (Snyder, 2019), and where human energy is a force for innovation. Important here is that the CPS's internal network didn't happen overnight because of administrative directives, but rather emerged naturally as the professional staff, with school leaders, pursued ideas for enriching the learning environment for its students. The school leader's role shifted over time from supervising individuals, teams and programs to managing the systems of work throughout the network, along with the health of the school's culture and its impact on every learner. Teachers are responsible for everything that occurs within their learning communities, while mentoring and coaching each other to "Olympic" performance. Many teachers take on additional major responsibilities for the entire school, which strengthens the school's network system, its purpose and values, and its sustainability potential.

Vital to educators at CPS is the weekly professional development event that is led by the Headmaster, many teacher experts in one innovation after another, and visiting experts with the focus on "What is best for kids". Professional dialogue is a dominant feature during these events, which spills over into the daily life of work with students. In addition, many teachers are sent every year for specialized training to become the school's expert in various initiatives, and then assume responsibility for the success of that program throughout the school. New teachers are trained in every core program of value to the school prior to their teaching debut. The administrative teams appear to have one purpose, and that is to support the work of teachers in achieving high success levels for each student. What now exists is a complex web of life, with its energy for learning, where every student is cherished and nurtured, and which is apparent to every student and parent, as well as to over 400 national and international visitors to the school each year.

In July 2020, a new headmaster was instated at CPS. This change, although planned before the pandemic, caused a kind of disequilibrium in the school that would later be used to stimulate a fresh mindset. Over the summer months, the school's leadership team built a strong energy system that connected the school and community in dynamic new ways. In August 2020, CPS opened its doors with a hybrid model for teaching and learning that was designed around the school's core values of team teaching and cooperative learning, communication, and community. The results from this innovation

were so striking that communities across the region celebrated CPS for its remarkable achievement. In the results section, we examine leadership choices that made this possible.

4 Results and Analysis

It is July 7 and a new day dawns on the campus of CPS. The headmaster of 25 years has assumed another leadership role in the school, and the new headmaster has entered the campus. Unique to this common transition, however, is that there are no teachers in the school and classrooms are empty. It is Covid-19 and the world is still deeply paralyzed by the current Pandemic. The question looming is how can CPS continue to serve its students, parents and community with a quality education that is safe for all? A schooling that is well known for its strong values in student-centered learning, team teaching, cooperative learning and respect for individuals and their unique talents, resilience, and community?

As a new Head of School, Nick found himself throwing the old paradigm of traditional solutions to which he was accustomed, out the window; if he was going to open the school in mid-August he needed a new set of lenses and a new approach. At his side were three other school leaders, Joyce, Mike and Jenn. *“It’s like we are building a puzzle without the outside pieces.”* shared Nick,

“It’s like we are trying to build a plane while we’re flying: just keep building because the puzzle keeps moving depending on what angle you are going at. We have lots of balls in the air at the same time trying to build a back-to-school-plan, build trust online since most of our meetings are distance-based, securing communication, and creating space for involvement and ownership among staff. There was no time for personal conflicts or to build relationships with me as a new head. We needed to do something quickly, in the right way, and communicate it: the question became: who’s on board?”

The associate headmaster, Mike, had eagerly awaited the arrival of Nick, and had spent the month prior concerned that unlike most schools, CPS had yet to develop a Back-to-School plan. He shared in an interview,

“We have some battle scars from our experience in the spring, and definitely from summer camp, in terms of what it looks like to open something in person on campus and what are the things you need to do. Summer camp was a disaster. No blame, but we learned so much from it, and that’s what really informed us. During the month of June, I’m thinking all these other schools already have their back-to-school plan. We don’t, and Nick doesn’t start until July 7. There was an anxiety, but what actually happened proved to be in hindsight a huge advantage to us”.

As the core leadership team, including the Headmaster, President, Associate Headmasters and Middle School Division leader, began to work together, it was evident that trust and communication were essential, as was the network systems of interdependent teaching teams, if they were to pull off a miracle. As Nick and Mike shared in their interviews, they needed buy-in from the staff and parents to ignite energy for getting innovative, while keeping their eye on the values and principles of the school. During our interview, Mike described how the leadership team spent the first day together walking through the school facilities. They visited every classroom taking notes about what equipment they had, what changes needed to be made to make the school safe. Partnering with them was the team from facilities management and the IT staff. To their advantage they also had the knowledge and experience of 20 other private schools in the area who had already completed their back-to-school plans. Getting a late start proved to be beneficial, for it challenged the leadership team at CPS to network with other schools and learn from them. As Mike shared,

“There were a lot of schools that had to back track on information about what they were going to do because the conditions of Covid and the CDC¹ protocols kept changing. Starting late allowed us a lot of organizational ambidexterity and we were writing a back-to-school plan at a rate faster than anyone else because we networked with others who had done lots of homework. When we shared it with staff first, and then parents a week later, they were blown away because nothing like it had ever before been developed at CPS”.

According to both Nick and Mike, the core leadership team (Nick, Joyce, Mike, Jenn) met every day for 12 hours a day over the next three weeks to build the 60 page back-to-school plan. Characteristic to their work was collaboration, networking, and communication, along with the values and principles of the school that became the glue and back-bone to their plan.

“We created a task force with four of the School’s Board members, who had the responsibility to network with 10 medical professionals within our community. We met with them as we were building the plan, which proved to be a very useful process. As we were writing we asked questions of the Board; they would pose the questions to the experts, and we would either get an answer right away or would do further research and get back to us. This enabled us to focus on the pedagogy as our area of expertise and feel confident that we had up to date knowledge about building healthy systems from the medical community perspective,” shared Mike.

¹ Center for Disease Control

In the middle of July, the first draft was ready, and it was time to share the plan with the faculty and get their input. According to Nick and Mike, the new model for schooling was designed on a hybrid model of teaching and learning with classroom and home-based (remote) learners being taught synchronously. One of the challenges that Mike articulated was how they were going to transfer to a hybrid model without much lead time or extra resources. As he shared their process, it was evident that internal collaboration would be essential:

“Rather than spending a lot of money on new technology, we got together with the IT staff and asked the question: what resources do we have that we can begin to utilize in a different way? The school was lucky to have invested in new I-pads for all teachers. Additional technology was added with an Omi-directional microphone, a Bluetooth headset, and a tripod for the I-pad to sit on in the middle of the classroom. This could give teachers the flexibility to move around the classroom, and for the students, both remote and in class, to participate in shaping their learning.”

The next step on the path to adaptation, as described by Nick and Mike, was to involve all staff. As Mike described, the purpose was first,

“to bring everyone together and to have a conversation with Nick as the new head of school. The second was to create the realization that we are trying to pull off something that we have never done before, and we need everyone’s help. Thirdly, we needed to demonstrate with technology our plan for how teachers would teach. On July 15, a week after Nick started, we had a faculty meeting in which we invited all those who were comfortable to come to campus, and the rest connected on zoom. This was the first time for them to be on campus since March.”

Characteristic of CPS was a strong network system of shared leadership among all staff and Divisions within the school, as indicated in the documents and weekly meeting schedule. Unlike most traditional school models in which there are specific roles structured within a hierarchy, CPS was known for its division teams and leaders who were also grounded in the classroom. *“Originally when I came here, shared Nick, I thought we needed a couple of the traditional roles because we are so flat. But soon I began to realize the power of the model and saw that the Division leaders in the current format know what is going on in the classroom. When we need to make decisions at the classroom level there is an immediate respect because the Division leaders know first-hand what the needs are of the classroom. This has been critical in our ability to build a new puzzle without knowing the parameters, more than safety and kids first.”*

The interconnectedness of the Division teams as a pedagogical and organizational system, fostered the conditions necessary for adaptability. Cultures of trust, established work systems and routines, and a clarity of common purpose were in place. As one of the teachers shared, when their division began to meet, *“everyone volunteered ideas for what was needed to be accomplished for classrooms in Early Childhood, and each teacher and aide spontaneously volunteered to take on tasks for the whole Division. Something that was new...it was spontaneous.”*

The school’s leadership continued to build on the strength and energy of collaboration. Not only was the entire school office staff and buildings and grounds staff involved at high levels to prepare the school, many additional groups, typically outside the planning process were involved: *“parents, a Board task force of lawyers/parents, area/parent medical doctors, the CDC guidelines, guidelines from Harvard University via a teacher, plus the office and buildings/grounds crew.”* It was becoming apparent that the ability of the school and the readiness of the school to adapt to a pandemic within a one-month time frame, was due in large part to following the natural laws of science to build energy systems and establish connections, and to value the strength of the network. Also prevalent within the structures was the role of communication: quick, open, transparent, inviting creativity centered around a common purpose, and grounded in the school’s values.

According to Nick *“the values at CPS are strong and shared amongst all staff. I have known this school for many years, having once worked here as a teacher and associate head. At that time one of the characteristics of the school was its strong value system for kids and learning. Returning ten years later, those values are still as strong as ever: the work ethic among teachers, care and concern from kids, wanting to go above and beyond and knowing they [the teachers] have autonomy to make this a “wow” experience for all students.”* This engagement and orientation to improvement was identified as an integral part of the energy system that made it possible for the school to regroup and to adapt their structures and culture of teaching in fundamentally new ways.

During the month of July, the core leadership team began to build a new “back-to-school plan” that was designed to ensure safety from the virus, be flexible in meeting the variety of student needs, and allow the school to stay open to adaptation over time. The initial prototype was designed, on blended learning models to deliver education simultaneously on campus and remote via Zoom, with a goal to maintain two core principles of the school pedagogical practice: team teaching and cooperative learning, according to Mike. The plan for reopening was to offer a team-taught combination of kids at home and in class. This required changes in the on-site school facilities, training for teachers, and the purchase of technological equipment. It also required a mind-shift among the staff and students, which advanced them into the digital culture. With little time for training, the teachers worked in teams to redesign their teaching and get ready for a whole new world.

In August 2020, the school opened its doors with a new blended learning model in which students were given the opportunity to learn from home connected to the classroom through live-feed video, or to be on campus. At school opening, 68% of the students were on campus, with the rest on ZOOM. This model was to be tested for the first 6 weeks of school and then re-evaluated for further refinement or a complete change, which at the time was unknown.

In Table 1, we highlight a few samples of changes that took place, categorized in the four elements based on the Digital Culture model (Snyder, 2007): technology, communication, pedagogy, organizational structure and administration. This list is only a start. As Nick shared, *“Everything changes so fast and we make decisions daily. I could write a protocol today, that I would need to change tomorrow. We just need to stay open and communicate with one another”*. What it does reflect, from a theoretical perspective is an understanding that leading sustainable organisational development is strengthened when structure, culture and identity are inter-dependent (Snyder, et al. 2018). The changes that were implemented according to Table 1 illustrate how the pedagogical values and identity subsumed within was foundational to structural innovation As well, the culture of the school made it possible to transform and innovate quickly.

Pedagogy	Technology	Communication	Organization
Team teaching and cooperative learning were the foundations around which technological solutions were designed.	I-pads and tripods were used to set up ZOOM stations on movable I-pad tripods to maintain flexibility and student-centered learning.	Teachers wore microphones over their face masks; at-home student photos were displayed on the classroom whiteboard.	The buildings and grounds were all cleaned; furniture and learning arrangements were modified. New sinks and walkway gates were added to self-contained student groups.
Kids were put into cooperative learning groups in 7 th grade English combining classroom-based and remote learners in learning communities	Teacher planning and scheduling have moved from paper to a shared online document and they communicate with parents daily to get feedback	Canvas LMS was used to communicate and share information; ZOOM was used to communicate synchronously during the day.	The flow of students was changed: students remained in the classroom and teachers moved from room to room: for example, the arts came to the classroom, the science teachers had a lab cart that they took with them.
7 th graders functioned in ZOOM breakout rooms, integrating in-class and at home kids into the groups to discuss short stories.	New fire walls were added to the campus, with increased broad band width and access points.	At home, students photo copy their work and send it to CANVASS, or upload it to email.	Desks were spaced either six feet apart, or plexiglass partitions were inserted between students at tables and desk combinations.

Table 1: Examples of innovation based on the CPS Back-to-School Plan

Two-months into the transition period, the leaders and teachers at CPS were going full steam ahead. The continuous improvement approach to change invited reflection about the experiences from all persons including: students, staff, parents, community. *“I have worn out the seat in my office spending time in communication with parents and community members about how we are doing.”* shared Nick. *“I am typically the guy who is never in my office, instead throwing a football with the kids, talking with and observing teachers. During this pandemic, my job is focused on a different kind of communication with all systems, including parents daily, to make sure that we are delivering the best possible education for their kids that is safe in a pandemic”.*

According to the teachers they have also seen changes in the kids over time. One of the teachers reported that *the tempo of life is slowing down and kids are starting to engage in their own learning differently.* Kids are also given more freedom to engage in their learning and to own their learning space. In the sixth-grade, students are invited to give identity and meaning to their personal workspace (for classroom-based kids this means their desks or end of the table; for distance learners, it means their home space). *“Kids pride themselves in their designs and they get really creative with the materials they use. One kid made a “COVID fortress” outlining his desk with Christmas lights and signs.”* Another teacher reported a perceived shift in attitude among teachers compared to the spring when she conducted a study of digital readiness. She shared that the focus is shifting from *“do we have what it takes to do this?”* to *“how can we do it sustainably?”*

New systems are emerging daily in the school from what they are learning about how to support this hybrid model of schooling. Currently teachers are exploring questions related to resource management for the kids: working on how to schedule 1:1 coaching for remote learners after school and in the classroom; how to reintroduce spontaneity in learning for teachers who don't have access to their own labs; how to create a sustainable daily schedule with the expansion of flex time and the spreading out of lunch periods. As well, how to help parents at all grade levels be satisfied with the online model of learning. *“One of the big lessons of leading in a pandemic,”* Nick shared, *“is how much stress affects people. Sustaining this requires that we have an open communication, clarity of purpose, clarity of role, and network of teams who are all working in the same direction.”*

5. Discussion and Conclusions

The ability of an organization to adapt quickly to customer needs at all levels is a contemporary indicator of Quality (Deleryd & Fundin, 2020; Tensil, et al., 2021). Creating organizational infrastructures that are fluid and flexible, while at the same time grounded in the organisation's values and customer needs is paramount if business and organisations in society will succeed as actors in the U.N. 2030 Agenda on Sustainable Development (Mårtensson, et al. 2019; Stegall, 2006; United

Nations, 2021). To truly connect sustainability and quality management requires that organisations adopt values that reflect a care for society and the planet, which are supported by the organisation's practices, routines and structures (Suarez & Montes, 2020). The values are drivers that keep adaptation in line with future goals, while the structures provide a framework for improvisation and innovation. To merely change structure, without being grounded in a set of values, places organisations at risk of failure (Mårtensson, et al. 2019; Snyder, et al., 2018). It is the inter-play between structure and culture that creates the conditions for leading sustainable quality development in today's society.

In this paper, we illustrated how a school was able to adapt quickly to the complex conditions of the Covid-19 Pandemic. This case is an example of the self-organising principle in the Emergence Paradigm (Fundin, 2021). Evident was how the leadership team built upon the school's foundational values of collaboration, teaming, and networking, and the need to maintain education for societal growth. Tensil, et al., (2021) suggests that this is important as a sustainability strategy that interconnects performance with innovation, customer needs and stakeholder engagement. The heavy emphasis on collaboration and inclusion in the school, also reflects the mind-shift to which Sanders (2010) refers, with the focus on dynamic thinking, collaboration, and drawing on the strengths of the internal school work systems. The leaders also demonstrated key characteristics for sustainable development by shifting from director to facilitator and co-creator (Rigby, 2018) as part of the need to find balance between standardizing operations and pursuing innovation.

In this case example, we also see how lessons from the sciences provided a framework for unleashing the mind-shift to see the school as a living and growing system. As well, key functions and routines were in place that created conditions for both adaptability and resilience (Suarez & Mortes, 2020). Seven quality management-based system functions were drawn upon by the leadership throughout the planning phases. Among the functions were: strategic leadership, cooperative work system, professional learning system, 21st century curriculum, student learning system, and global learning system (Snyder, 2019), each of which was connected by the core purpose of the school, which is to prepare students as competent and caring global citizens. It is our hope that this paper contributes insights into how leaders can develop organisational systems that are both stable and dynamic to free adaptability and innovation as part of the ongoing responsibility to contribute to sustainable societal development.

6. References

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