**Responding to the Coronavirus:
Reinventing Ourselves Through Transformative Problem Solving**

Michael F. Mascolo
Merrimack College
mascolom@merrimack.edu

Sandy Burbach
Enysdale Speech and Language Therapy
sandyburbach@gmail.com

Abstract

The coronavirus pandemic poses an existential challenge to many aspects of society. Responding effectively to the systemic challenges of the coronavirus requires more than merely girding one's loins. In the short-term, it has required swift action to manage the immediate force of the pandemic. In the long-term, for many sectors of society, adapting to the pandemic may require nothing less than reflecting upon and reinventing longstanding assumptions, systems and practices. We propose a model of *transformative problem-solving* to support the *dynamic adaptation* of communities, organizations and individuals in the face of the coronavirus pandemic. The model calls for reflexivity about basic assumptions, goals, values and practices that structure teaching and learning in the academy, and proposes ways to evaluate and transform complex and entrenched institutional systems in a time of extended crisis. We illustrate the approach with examples of innovative organizational adaptations that have emerged as a result of the coronavirus pandemic.

Keywords: COVID-19, Transformative Problem-Solving, Reflexivity, Crisis Management, Organizational Change

Constructivism is the idea that the meanings that frame our action in the world are actively created rather than innately given or externally imposed. While we are not free to construe the world in just any way, any event is open to multiple possible interpretations. According to Kelly (1955), "all of our present interpretations of the universe are subject to revision or replacement" (p. 15). For Kelly, it is when our interpretations of the world *fail* – when they no longer allow us to organize our understanding of ourselves in relation to the world – that it becomes necessary to change them. We are, arguably, entering a time in which many assumptions about the nature of our worlds are ripe for revision.

The coronavirus pandemic has threatened basic structures of everyday life and the effects are being felt at every level of society. While governments are trying to find a balance between potentially repeated cycles of "Respond, Recover and Thrive" (Deloitte, 2020a, 2020b, 2020c), the same reactions to this emergent change are being played out on personal, familial, community and organizational levels. Emergent change, is by definition, unplanned and successful navigation requires a sensitivity to local contingencies and the ability to experiment, learn and make new sense of real-time exigencies (Burnes, 2009).

The pandemic has exposed longstanding problems related to the sustainability of many existing social institutions. It is tempting to believe that problems of sustainability are technical ones, that can be resolved by merely technical means. However, while technological innovation will be necessary, our current crises raise questions about the core values that structure individual and collective life. What values, beliefs and practices are being challenged by the pandemic? What values are worth preserving? Which should be discarded? How can we reinvent ourselves in ways that are both life-affirming and sustainable? Solutions we find now need to be fit for purpose for the future.

In what follows, we examine how constructivist thinking can help individuals, organizations and other collectives as they seek to adapt to the threats[1] of the coronavirus and other potential existential crises. This can be done through the process of *transformative problem solving*. Transformative problem solving is a holistic, systemic and reflexive process of rethinking and restructuring core values, beliefs, and practices in light of systemic threats (Mascolo, 2020a). Grounded in Kelly's (1955) experience cycle, transformative problem solving is a general process that can be applied to systemic problems at any level of social organization. We illustrate the process of transformative problem solving in the context of how a group of families responded to the problem of educating their children in the context of the coronavirus shutdown. We then discuss the applicability of transformative problem-solving at broader levels of social organization.

Adaptive Transformation in a Time of Crisis

Adapting to existential crises often requires re-inventing and reconstructing fundamental ways of relating to our worlds. In what follows, we outline a holistic model of transformative problem-solving during times of crisis. The model is organized around three key principles.

---

[1] In this paper, we use the term "threat" in its conventional sense to refer the possibility than an event can produce damage to some desired state of affairs. This definition is consistent with Kelly's (1955) psychological conception of threat as the awareness of comprehensive and imminent change in an individual's core constructs.

First, transformative problem solving is a *continuous process* rather than a singular event (Fogel, 1993). As process, transformative problem-solving occurs over time and continuously adjusts to shifting circumstances (Carmeli et al., 2014; Eriksen, 2008; Lin et al., 2006; Kegan & Lahey, 2016). Continuous monitoring of feedback to novel interventions is central to the process of transformative problem-solving.

Second, transformative problem-solving is founded upon *reflexivity* (Carmeli et al., 2014; Eriksen, 2008). *Reflexivity* refers to the process of reflecting upon the assumptions, beliefs and values that structure what we do. The practice of reflexivity functions to orient people toward fundamental, tacit and often unquestioned beliefs that structure the functioning of an organization. This requires exposing and questioning time-honored assumptions, values and practices that may be experienced as sacrosanct. The more foundational such beliefs, the more implicit and unarticulated they may be. It is precisely the failure of assumptive frameworks to accommodate to novel circumstances that brings them into awareness.

Third, transformative problem-solving focuses on the *holistic coordination of multiple needs* through the systemic transformation of existing systems and resources (Kegan & Lahey, 2016). Crises do not simply create local problems; they pose threats to the systemic integrity of any given organization. Adaptation requires a capacity not only to represent multiple problems simultaneously, but also an understanding of how emergent problems *affect each other* within the context of the larger system.

Systemic problems require the flexible coordination of multiple constituencies and stakeholders, in order to produce systematic solutions. Thus, it follows that the important moments in the process of adaptive transformation are not necessarily the invention of novel solutions to particular problems, but instead, the process of continuously and reflexively monitoring feedback from solutions and their relevance to the organization's adaptive system of assumptions, goals, values and practices. Adaptive transformation thus requires both continuous adaptive re-construal of situations, in combination with concurrent adaptive actions.

Transformative Problem-Solving: The Process

Transformative problem-solving proceeds as an iterative series of loosely-organized phases that evolve dynamically over time, as depicted in Figure 1. These include (a) *encountering the threat*, (b) *coordinating a leadership process*; (c) *constructing a systemic problem-solving space*; (d) *constructing possible solutions through constructive dilation and constriction*; and (e) *synthesizing and implementing a systemic solution*. These steps evolve continuously and function in the service of resolving the initial threat. The process should not be seen as linear; as one moves through the process, it is often necessary to engage in backward transitions to reexamine prior phases and steps before moving forward again to later phases.

To the extent that a crisis challenges longstanding goals, beliefs and practices, the practice of *reflexivity* is necessary in order to identify the ways in which existing assumptions, values and beliefs influence the creation of the crisis, obstruct attempts to resolve it, or open up novel ways of resolving the crisis. The importance of reflexivity cannot be understated. In the context of a crisis, it is often difficult to overcome the inertia of maintaining existing assumptions and beliefs about the functioning of any given social system. Reflexivity calls on us to attend closely the discomfiting experiences that a given threat engenders in us. Our

reflective awareness of what is being threatened provides us with clues about what assumptions, values and practices may need to change in order to adapt to the threat. As shown in Figure 1, the process of collaboratively reflecting upon the implicit and explicit assumptions, beliefs and values occurs continuously at each step of responding to a threat.

Phase 1: Encountering a Threat

The process of transformative problem solving begins with the registration of some systematic *threat*, such as the COVID-19 virus. In this paper, we differentiate between the concepts of threat, crisis, and existential crisis. A threat simply consists of the awareness that persons or events are likely to bring about damage to some desired state of affairs. A crisis consists of the state of encountering and addressing the actual or impending damage produced by such a threat. An existential crisis is one that has implications for the continued existence of the state of affairs under threat.

The question of what constitutes an emerging threat is sometimes difficult. In the context of the coronavirus, for example, while epidemiologists long predicted that a pandemic could occur, it took time for the virus to be properly assessed as a legitimate threat. This had little to do with availability of knowledge or technical acumen; it had more to do with social, political and even emotional reactions to the fact of the virus. Official bodies varied in their reactions to the virus. Some immediately acknowledged its dangers; others appear to have either intentionally or unintentionally understated the scope of the virus threat – perhaps out of fear of being unable to manage public reaction or a desire to maintain systemic constructs around reputation and power. Reflexivity and openness are necessary in order to keep such reactions in check. However, this assumes that openness, fluidity and the ability to operate in unpredictable circumstances has been built into systems to counter our natural resistance to change (Ford et al., 2002). In reality, the Home Education Project discussed below is illustrative of the range of responses to COVID-19 engendered change encountered in many contexts. Many have suggested that resistance to change in the United States and United Kingdom resulted in policies that led to the rapid spread of the virus and a considerable loss of life.

Phase 2: Coordinating a Leadership Process

As the threat moves toward a crisis, it is necessary to mobilize people and resources in order to confront it. There are many ways of organizing groups in the context of a threat. Typically, there is a need for some sort form of leadership among the group. A leadership system may already exist or emerge dynamically from the constituents themselves. Regardless of its origins, autocratic or top-down leadership styles run the risks of cutting off alternative voices from those who hold different forms of expertise. Laissez-faire approaches run the risk of an uncoordinated response to the crisis, leading to multiple diverse attempts at resolution that are at cross-purposes to each other. In a democratic society, it is typically helpful if communication with the community is *compassionate*, *collaborative, authentic, authoritative, informative and inviting* (Carmeli et al., 2014; McNaughtan et al., 2019; Perlmutter, 2018). Regardless of the form of organization, there is a need for leaders to foster a sense of *urgency* among stakeholders and other members of a community (Kotter, 2008) that paves the way for collaborative inclusion and collective action.
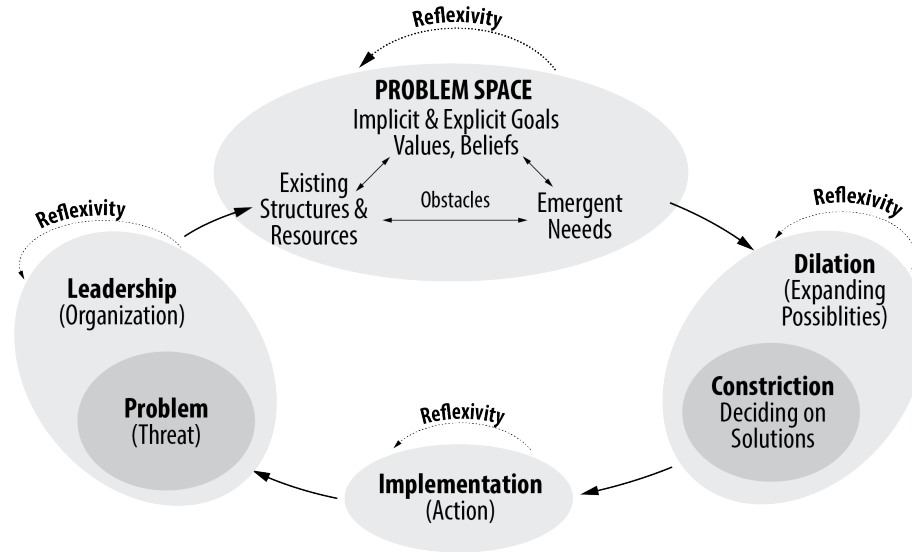
Figure 1. The Process of Transformative Problem Solving

Phase 3: Constructing a Systemic Problem Space

Any threat – especially one that occurs in the context of an existential threat, can be understood as a kind of adaptive conflict. Because existing conditions are subject to dynamic fluctuations and nonlinear change, the process of representing the nature of the problem and threat must be ongoing and flexible. The process of problem solving begins with an immediate, holistic, systematic and ongoing analysis of the nature of *changing conditions* as they relate to existing goals, structures and practices. A threat is thus a *relational* phenomenon. It contains at least two conflicting elements: an *initial* and *desired state*; an *event* and a *thwarted goal*; an *unmet set of needs* and the desire to *meet those needs*. In a problem, the task is to remove the adaptive conflict – that is, the distance between the initial and desired states. To solve a systemic problem, as indicated in Figure 2, it is helpful to seek to develop a *problem space* (Clariana et al., 2013; Helie, 2013). A problem space consists of a representation of the problem to be solved. The development of a comprehensive problem space is essential to successful resolution of the problem. A partial or inadequate representation of the problem diminishes the probability of resolving the problem in question.

While it may seem that identifying a problem is a relatively straightforward task, this is not necessarily so. A system under threat can adapt in several ways: it can seek to preserve its current structures by eliminating the external threat; it can maintain and fortify its current structures in order stave off the threat. Alternatively, it can transform its current structures in order to accommodate the threat, or seek to coordinate all of these strategies simultaneously. In the context of the coronavirus, the first option would require not only developing vaccine to eliminate the virus on a global level, but also developing procedures to anticipate and respond to future viruses and pandemics. In the absence of a vaccine – in the context of a "new normal" – there is a need to seek transform or restructure existing institutions – at least in the short run if not the long term.

It is here that reflexivity becomes important. It is necessary to assess the *full range* of the relational threat. This not only includes the changing external conditions, but also implicit and explicit assumptions, values and practices that may be thought to be fixed, sacrosanct, or otherwise unchangeable. There may also be a reluctance to re-examine core assumptions and beliefs due to the sheer scope of a threat. Examples of such range from failure to address the systemic nature of climate change; difficulties modifying the missions of business in the time of lockdown; to the reluctance of schools, colleges and universities to plan for the possibility that surges in the coronavirus may force them to maintain a system of blended online and face-to-face learning for several academic years.

These challenges also exist at personal levels. For example, the requirement for universal home education during COVID-19 has raised the issue of how much autonomy parents have to direct the content, volume and delivery of education for their children, as it threatens long-held beliefs about the importance of on-site school attendance and the role of parents as 'assistants' in the educational process. All of the above signal the need for adaptive transformation in the face of a significant threat to the status quo.

Phase 4: Constructing Possible Solutions Through Constructive Dilation and Constriction

Systemic problems call for systemic solutions. Transformational problem-solving is systemic in the sense that it seeks identify multiple interrelated problems and invent solutions that reconcile the conflicting demands of multiple problems simultaneously. The goal is the transformation of a system that is less adaptable, to one that is more adaptable over both the short- and long-term. The problem to be solved is one of transforming existing structures and resources in order to meet the adaptive conflict: in the context of the organization's goals and values, what types of novel structural systems can meet the multiple needs represented in the problem space? In this context, it is not sufficient to address each need in isolation; the various needs and values must be considered in relation to each other within the proposed transformation solution. Toward this end, it is helpful to think of it as a brainstorming process, involving cycles of both *dilation* and *constriction* (Kelly, 1955). Dilation consists of the process of extending and widening the range of possible ways to meet emergent challenges. This process may identify hitherto hidden or unacknowledged relationships and constructs which might enable the construal of new meaning, or which may, indeed, be blocking transformational problem-solving.

After constructing multiple possible ways to adapt to the crisis, *constriction* of possibilities occurs in order to identify a single initial solution to the problem at hand. A novel, shared solution is synthesized through the selective and systemic integration of possible solutions proposed at the dilation stage.

Phase 5: Synthesizing and Implementing a Systemic Solution

The implementation phase of transformative problem solving is indicated in Figure 4. The implementation phase should not be seen as the mere application of a fixed plan or solution. In transformational problem-solving, implementation occurs as an ongoing process of dynamic monitoring of the results of adaptive efforts. The organization should be open to flexible and continuous adjustment of the ongoing adaptive strategies in reaction to the results of monitoring. In so doing, however, the process must continue to be systematic; it is necessary to consider how any single modification in an ongoing solution will affect other elements of that system.

The process of adaptive transformation occurs against the backdrop of deep uncertainty. It is often the case that solutions that one believes are almost certain to work will contain hidden flaws that require immediate attention. Because all adaptation requires adjusting already existing structures and resources to novel exigencies, it is often difficult to identify alternative solutions to a problem under conditions of failure. While it is possible that some problems are unsolvable, it is more likely that what makes a problem appear to be unsolvable is one's current representation of the problem. Adaptation may require structural changes that are difficult to identify because they are difficult to acknowledge. They may be implicit, unconscious or even unspeakable. This raises the importance of *reflexivity* in the process of crisis management.

Reflexivity in Transformative Problem Solving

Reflexivity consists of the process of reflecting upon the assumptions, beliefs and values that structure human action (Carmeli et al., 2014; Eriksen, 2008). Reflexivity allows people to expose first principles and basic beliefs which we may not always be aware of in everyday action. The idea that we may not be aware of the core assumptions, values and beliefs that guide our action raises a problem: How are we to become aware of that about which we are unaware? To the extent that we are not ordinarily aware of a grounding belief, we cannot use our awareness to become aware of the said belief. How, then, is reflexivity possible? There are at least two broad processes that structure the process of reflexivity: (a) the experience of *emotion* and (b) *openness* to novelty in joint problem solving.

The experience of emotion is key to the process of reflexivity. Emotions are felt modes of engaging the world that arise in the context of shifting circumstances (Frijda, 1986; Mascolo, 2020b). As such, emotional experiences are functional processes – they alert us to changes in events that have significance to our ongoing well-being. As a result, attending to the emotions that emerge over the course of a crisis can direct attention to tacit and otherwise implicit assumptions, beliefs, and values that are under threat. In a crisis, we are often reminded of the need to keep emotions in check -- not to let strong feeling get in the way of sound judgment. While it is important for problem solvers to act with calmness and clarity, it is a mistake to think of emotions as processes that necessarily impede sound judgment.

Emotions are essential to all intentional judgments and actions (Freeman, 2000). In novel situations – such as a threat or crisis -- emotions *organize* our conscious awareness by *alerting us* to circumstances that require our attention (Lewis, 1996). In responding to a threat, negative and difficult emotions are indicators that our anticipations of our worlds have failed. They orient us to focus on the ways in which our current experience contrasts with our basic assumptions, beliefs, and values. Bearing witness to our own emotions is a central strategy for fostering reflexivity. In seeking to identify the source of our emotional experiences, we are able to identify which motives, values and concerns have been violated. We can then bring those concerns into awareness, reflect upon them, and evaluate their role in adapting to shifting circumstances.

A second source of reflexivity involves *openness to alternative perspectives* in the process of problem-solving. The process of *encountering the Other* is a central means of exposing the tacit assumptions and beliefs that organize our action. The experience of engaging with others who express novel ways of thinking, feeling and action can be jolting. In such situations, it is easy to respond pre-emptively by rejecting ideas that are novel, foreign, or

which challenge our existing understandings. However, it is precisely the jolt of encountering novel perspectives that is central to the process of reflexivity. It is through our encounters with different perspectives that we are able to become aware that we have a perspective at all. The social exposure of our individual perspectives provides the impetus and opportunity for reflexivity. In a time of crisis, collaborative openness becomes a key process by which novel ways of representing and adapting to a problem can be invented.

Transformative Problem Solving in Action: The Home Education Project

In what follows, we explain and illustrate the process of transformative problem solving with an analysis of how a group of families responded to the need to rethink their approach to educating their children in the context of the coronavirus lockdown. The project – which we call the *Home Education Project* -- arose in response to the author having been contacted independently by four mothers in lockdown.

Two were teachers of primary school-age children, who also had a total of four children of similar ages. One child had a formal diagnosis of Developmental Language Disorder (DLD) and was receiving Local Authority support in school. Both teachers were providing daily work and online teaching for their classes while the schools were shut down. Two mothers were furloughed at home with their five children. One of these children (14 years-old) had formal diagnoses of autistic spectrum disorder (ASD) and generalized anxiety – she had been out of school for three years and spent the majority of the day with grandparent caregivers. The other mother had a child who had experienced brief periods of school refusal during primary years but was now settled in the second year of secondary school. He had been identified as having developmental coordination disorder (DCD/ Dyspraxia) in primary school, but was not receiving any formal support. All the other children attended mainstream schools. None of the parents had met before the group was convened, but all four families were informally acquainted with the facilitator in her role as a specialist speech and language therapist in specialist education, or as a mentor on several online closed parent and professional groups supporting special educational and social, emotional and mental health needs.

All four expressed frustration and anxiety at being precipitated into a teaching role with the children who usually attended school. However, all four parents also clearly stated differing core values, beliefs and fears around home-schooling, school attendance and personal competence in teaching, for example: "I would feel I had given up on my child if I took him out of school"; "School is the best place for them to make friends"; "I'm too stupid to teach them"; "Some children are just not suited to school".

The process of reflexivity occurs at each phase of the transformative problem-solving process. Table 1 provides a series of examples of reflections that were motivated by emotional experiences generated by the threat. Table 1 identifies (a) a series of emotions experienced by members of the group, (b) the form of actual or impending change that structures the emotion in question, as well as (c) the reflective experiences, insights and questions raised by these emotions. As will be seen, the process of reflexivity began at the very first phase of the transformation problem solving process.

Table 1
Exposing Basic Assumptions through Emotional Reflexivity

	Shifting Relation to the World	Emergent Questions & Insights
Surprise	Speed with which virus has forced changes	**Insights**. Everything has changed. We were not ready for this. We are not in charge of the planet. This is actually a warning about global warming. We have to stop being so arrogant. **Questions**. Do we want to change the way schools work? Are we teaching children to adapt to change? How do we get politicians and businesses to work with the world instead of exploiting it?
Fear	Physical safety; loss of income; survival of the institution	**Experiences/Insights**. This will go on for a long time. I can't blame my children for feeling small and helpless- they are! I can't bear to go back to school refusal again. My husband will walk out if he does. My parents are so vulnerable and I rely on them so much. I don't think I can do this. **Questions**. How do I keep an eye on vulnerable children? Will we be blamed for our children's lack of progress? What will happen to my children if I get ill?
Grief	Loss of established routines, connection, community, of purpose and meaning	**Experiences/Insights**. So many people are dying; It really is the end of the world; I miss my life. I feel so helpless. Some things are lost; some things are only changed. My feelings will change. Sometimes I don't want to get up in the mornings. I miss being with adults. I feel terrible that so many health professionals are dying. **Questions**. What do I do if I am too tired and overwhelmed to support my children? Am I overreacting? How will Mum feel if she dies without me there? Why don't we care enough about the really important people in society?
Frustration/ Anger	Frustration over uncontrollable events; blaming agents responsible for violating of what ought to be	**Insights**. The whole country is struggling with the kind of poor bureaucracy we have fought for years. You can't blame the parents this time! We fought so hard to get him help/ back to school; now they have ripped it away. We were fined because she couldn't go to school- but now it's okay? **Questions**. Why didn't the government plan for this? Will we be blamed if he refuses again after this? Will we be fined or prosecuted again? Why must I fight with them every time they are supposed to do their work? Why must I suffer for their incompetence?
Empathy/ Compassion	Care and compassion for the distress of others.	**Insights.** We need to support and care for each other. Competition in education is meaningless in a crisis; Cooperation will help us cope with loss. It is okay to feel okay. We are doing our best with what we have got. Education is a life-long process; time out is not important. Each family has different priorities. Mental health is everybody's priority. **Questions.** What's happening to my vulnerable kids? How can I help health care professionals? How can I help my community? Would it help if I explained how we home-school our children?
Guilt/ Shame	Sense of not being able to live up to standards of effectiveness	**Insights**. The work I am sending is not useful. It is not meeting anybody's actual needs. It is unfair to expect parents to do my job. I have no idea if they are learning anything. I'm too uneducated to teach my own children. Every time I feel guilty, I get angry with the children. I am the reason she is having so many meltdowns. **Questions.** Am I a terrible person because I am glad I don't have to go and see Dad? Am I still a teacher if I can't teach online? What do I do if I am too overwhelmed to support my children? How do I meet my own children's needs if I have to spend all my time looking after other people's children?

Encountering the Threat and Coordinating a Leadership Structure

The impetus for the Home Education Project came about after the second author was contacted by three parents from separate online support groups (School-avoidance, Selective Mutism and Dyspraxia/ Dyslexia) seeking help and information about managing the home education load that parents were being forced to shoulder during shutdown. Coincidentally, two comments were posted on similar support websites at about the same time: "Welcome to my normal. I haven't been out of the house in weeks because my D. refuses to leave the house and won't let me either"; and "It's ironic that we are suddenly viewed as "experts" in home-schooling, after being pariahs and bad parents in the eyes of the school system for years."

Initial contact conversations enabled parents to explore the full range of the relational threat. The commonality of parental experience, identified as "failing to home-school", was enforcing shifts in core assumptions and beliefs around self-efficacy, "good" parenting, and professional identity: Parents who had previously expressed views that home-education was an "easy option" and "failing" a child, gained insight about a lack of hitherto- unknown skills. Teacher-parents recognized that they depended on the school's authority structures to carry out their role. Parents who felt that teaching was the "school's job" and blamed it for their child's lack of progress/ support realized that their own experiences of school underlay some of their avoidance of consistent parent-teacher relations. Three parents expressed fears that all their children would prefer to be at home and would demand to be home-schooled after COVID-19.

The therapist expressed the view that these sudden shifts in identity between polarizing positions such as "bad/ good parents", "novice/expert" and "competent/ incompetent" represented a dilation process that might offer opportunities for reinvention, conciliation and empowerment if guided sensitively. Thus, an offer was made to three support groups and a home-school group to convene a Zoom group, with the view to developing a co-constructed transformative solution to dealing with the "new normal" during and after COVID-19.

Group membership was open-ended, with some participants attending 2-3 sessions and then withdrawing, once they felt they had sufficient resources. Eight participants out of a total of 15 attended consistently. Five people brought friends to meetings (unexpectedly) in response to their needs, four of whom stayed. Numbers in Zoom sessions averaged around eight, although there were up to ten. It was agreed that this made the group somewhat unwieldy, and did not allow for all voices to be sufficiently heard, so sessions were repeated, with a quorum of four participants from the previous session to provide continuity and reflection.
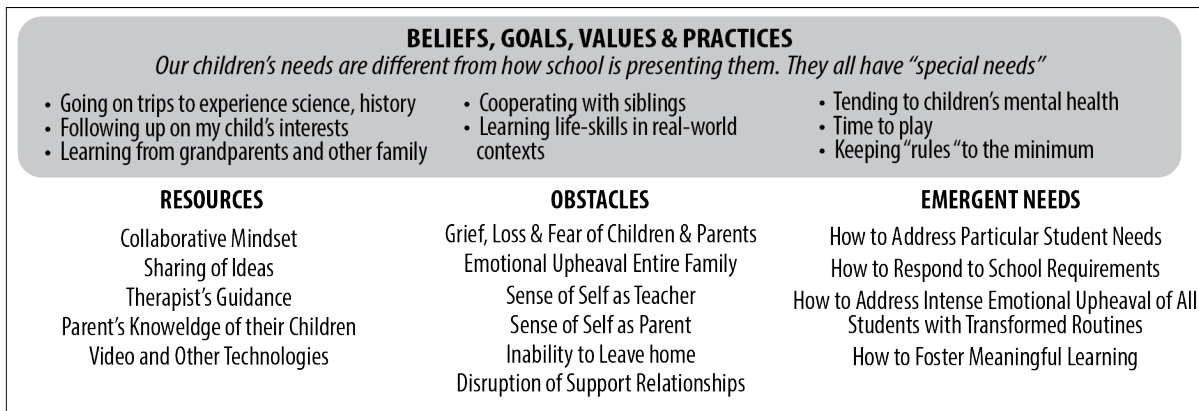
The facilitator kept notes on the development of problem-spaces, moments of reflexive awareness, insight and shifts in belief patterns and assumptions, in order to maintain some sense of the shape of the process, as well as individual concerns and feelings. Once the group had developed a measure of cohesion, express agreement was sought to apply Personal Construct Psychology strategies to structure conversations and enrich exploration and problem-solving.

Constructing the Problem Space

A problem space provides a representation of the structure of the concerns that an institution must coordinate during a time of crisis. There are many ways to structure a problem space. It is often helpful to divide the problem space into: (a) core *goals, beliefs, values and*

practices, (b) existing *structures and resources*; (c) *emergent needs* that arise as a result of the crisis, and (d) *obstacles* to meeting those needs. The task of the institution is to adapt *existing structures* in order to meet *emerging needs* within the context of *core goals and values*.

      Core goals, beliefs, values and practices*.* In order to reduce potential defensiveness between the school/ homeschool groups, the initial problem-space was posed as "How has COVID-19 changed your involvement in your children's education?" From this point, it was also natural to elicit beliefs regarding education, which the facilitator tracked and presented to the group. It was quickly agreed that the "Stay at Home" directive and consequent loss of experiential days out was a great source of frustration because all parents considered that to be a central pillar of home-schooling. This led to a collection of other "pillars" that reflect the assumptions, beliefs and values embraced by the group as they approached the question of home education. These pillars are represented in the top part of the problem space depicted in Figure 2.

BELIEFS, GOALS, VALUES & PRACTICES
Our children's needs are different from how school is presenting them. They all have "special needs"

• Going on trips to experience science, history • Following up on my child's interests • Learning from grandparents and other family	• Cooperating with siblings • Learning life-skills in real-world contexts	• Tending to children's mental health • Time to play • Keeping "rules" to the minimum

RESOURCES	**OBSTACLES**	**EMERGENT NEEDS**
Collaborative Mindset Sharing of Ideas Therapist's Guidance Parent's Knowledge of their Children Video and Other Technologies	Grief, Loss & Fear of Children & Parents Emotional Upheaval Entire Family Sense of Self as Teacher Sense of Self as Parent Inability to Leave home Disruption of Support Relationships	How to Address Particular Student Needs How to Respond to School Requirements How to Address Intense Emotional Upheaval of All Students with Transformed Routines How to Foster Meaningful Learning

Figure 2. Problem Space for Home Education Project

      The group expressed surprise at the commonalities, and stated that they were expecting to be very different, given "where we were coming from." This first acknowledgement of *encountering the Other* tangibly changed the mood of the group from defensive to compassionate. One of the furloughed mothers observed that this was probably the main effect of COVID-19:

> Now that "we are all in this together" (quoting government slogan) it shows how irrelevant some of the things we argue about are. We are all just trying to be good parents, really. And you have to go with your children's needs. That's what I am finding confusing about the work the school is sending through. It just doesn't seem important. He NEEDS to sit on the sofa and read stories. He's gone very small."

A further insight - "in my heart I obviously want what's best for my children; I suppose I also see schools as convenient; sometimes I forget what I disliked about school. I just put them in it." – opened the group to the permeability of their Education constructs and the possibility of redefining them during lockdown.

      Existing structures and resources*.* Revisiting the "pillars" led to some fruitful sharing of resources and ideas, which shifted the position of the "too stupid to teach them" mother in the group significantly, as she proved to be resourceful and highly creative. She admitted that she

was amazed that others were asking for her ideas, to which one of the teachers replied: "You are exactly the sort of person we need post-COVID. You can see how school subjects fit into everyday life and you can turn any situation into a learning experience. I wish you worked with me."   This created an opportunity to introduce the concept of bipolarity in construing (Neimeyer et al., 2000) and the usefulness of exploring contrasting poles when trying to explore the "shape" or "edges" of a value or issue. There were four basic polarities that were considered to be key to transformative change. These included *flexible parenting* vs. *following the rules*; *child-centered* vs. *school-centered* teaching; *mental health* vs *educational process* as the primary need; and *taking initiative* vs. *waiting to be told what to do*.

The group was encouraged to explore the polarities and their implications over the next two meetings using two visual Personal Construct therapy techniques. The first involved *pyramiding* (Landfield, 1971; Fransella, 2005), which identifies the group's subordinate constructs for each pole by asking "What?" and "How?" questions. The second consisted of *laddering* (Fransella, 2005), which entails progressively working towards superordinate constructs on which a system is built, and which may be most resistant to change. Each member considered which pole they would prefer to be associated with and then "stepped up" to a higher superordinate construct by asking "why is this preferable?" This was followed by considering the contrasting pole and asking "why not this one?" until descriptions became self-evident or too difficult to express. This task was initially done off-line, in case it felt too exposing. However, parents began to refer to the experience spontaneously in conversation and both techniques quickly became part of common practice, with people "quickly laddering/ pyramiding to check our thinking" in the midst of conversation.

Emergent needs that arise as a result of the crisis. The group identified *grief* as a superordinate construct in relation to COVID-19 in the first session. Initially this was construed primarily in relation to death or fear of the death of vulnerable family members, but examination of constructs of loss in relation to grief rapidly widened the domain to include lost lifestyles and societal systems that keep us safe, fed, cared for, educated, employed and purposeful. There was a common assumption that grief is comprised of discrete stages (Kubler-Ross, 1969) so it was felt expedient to provide brief psychoeducational input on cyclical and process models of grieving (Stroebe & Schut, 1999; Gillies et al., 2014) and the importance of finding meaning in the experience. An additional National Health Service document, entitled *Grief after Bereavement or Loss* provided a list of common symptoms and mentioned that not all symptoms were present all the time.

Parents of children with school refusal and learning difficulties also shared some of their ongoing experiences of grief in relation to their children, and expressed emotion around being members of outgroups, struggle and rejection in "normal life". The group's response was entirely compassionate. They expressed the belief that grief and loss needed further exploration and "mapping" on both a personal and group level. It was suggested that those who wished to, could create pyramids on *lost-remaining* construct poles, by asking "How do I know it is lost? What is in its place?" in order to examine the personal and group implications of the different types of loss being experienced in the group. This exercise was done off-line, as members considered that it might be too personal to share, but was spontaneously referenced during ensuing discussions pertaining to grief and change.

Constructing Solutions through Dilation and Constriction

The quality of problem solving is deeply organized by one's representation of the problem. This point was aptly illustrated in the deliberations of the Home Education Group. As shown in Figure 2, the primary problem is one of fostering meaningful learning in children in the context of the COVID lockdown; the deep sense of grief, loss, confusion and fear experienced by both children and parents; the special learning and emotional needs of all the children and not just those with special needs; demanding school requirements; and the self-doubt of the parents. Early in the brainstorming process, the group agreed that, given the emotional difficulties created in children as a result of a disruption to their routines, there was "need to keep 'rules' to a minimum." Too many demands on the children led to increasing emotional escalation and social withdrawal. The group acknowledged that it was time to "experiment with different ways of doing things." Members reported oscillating between *confronting* and *avoiding the tasks* of grieving. They experienced difficulty responding to school demands and the uncertainty that accompanied contradictions in the school's "official" responses to the crisis.

The brainstorming process followed a series of loosely structured steps. These steps are depicted in Figure 3. Efforts to create a solution to the problem of structuring the education of the children moved through a series of internal conflicts within the problem space. The process began with (I) the registration of the crisis, and the lockdown placed upon the community. At Step II, parents and children responded to the lockdown with feelings of grief, loss and confusion. The school responded to the crisis by attempting to promulgate a set of learning standards throughout the parenting community. Tailored primarily to students without special needs, these standards imposed high demands on all the students, but especially on those with additional learning needs. At Step III, as parents attempted to use the standards to teach their children, they experienced difficulty. The lockdown created high degrees of emotional upheaval on the part of the students; students had considerable difficulty adjusting to the lockdown environment. Feeling as if they "should" have been able to teach their children, the parent/teachers reported shame, guilt and feelings of self-doubt. In this way, parents experienced a conflict between their sense of competence as teachers and parents and their sense that they were unable to support their children's fundamental developmental needs. This, in turn, threatened the heart of their parenting identity, beliefs and values.
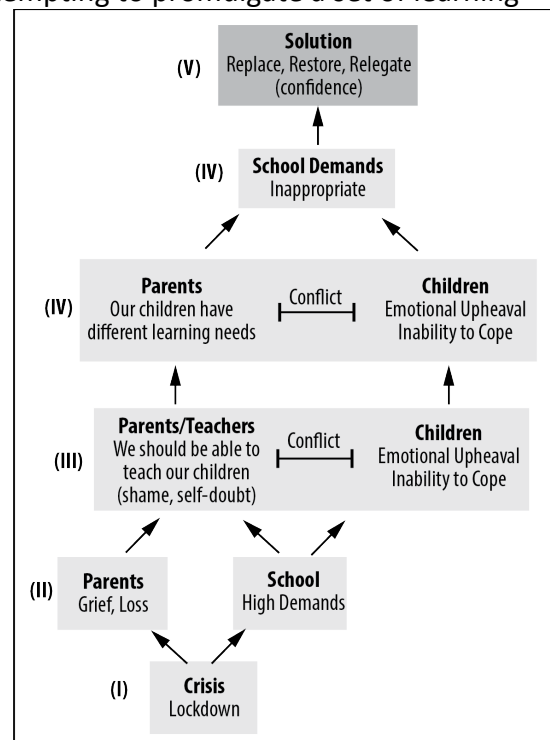

At Step IV, as a result of their work with the therapist, the group was able to represent their sense of grief and loss, as well as their awareness that their children's learning and emotional needs were in conflict with school demands. The resolution of this conflict occurred

at Step V with the construction of an awareness that the school's demands were indeed inappropriate for their children, and particularly for those with special needs. This insight allowed a dramatic transformation of the problem space. Realizing that they could indeed rely upon their own expertise as teachers and parents, the group was able to agree that their children's emotional needs should take precedence over the academic demands imposed by the schools. With renewed confidence, the group directed their efforts toward restructuring their teaching around their children's emotional needs rather than around the curriculum provided by the school.

Synthesizing and Implementing the Solution

Formative insight was provided by a parent who revisited the four original polarities and realized that they could be laddered to explain the group's rationales for changing their approach to home education. The process of constructing the formative insight is depicted in Figure 4.
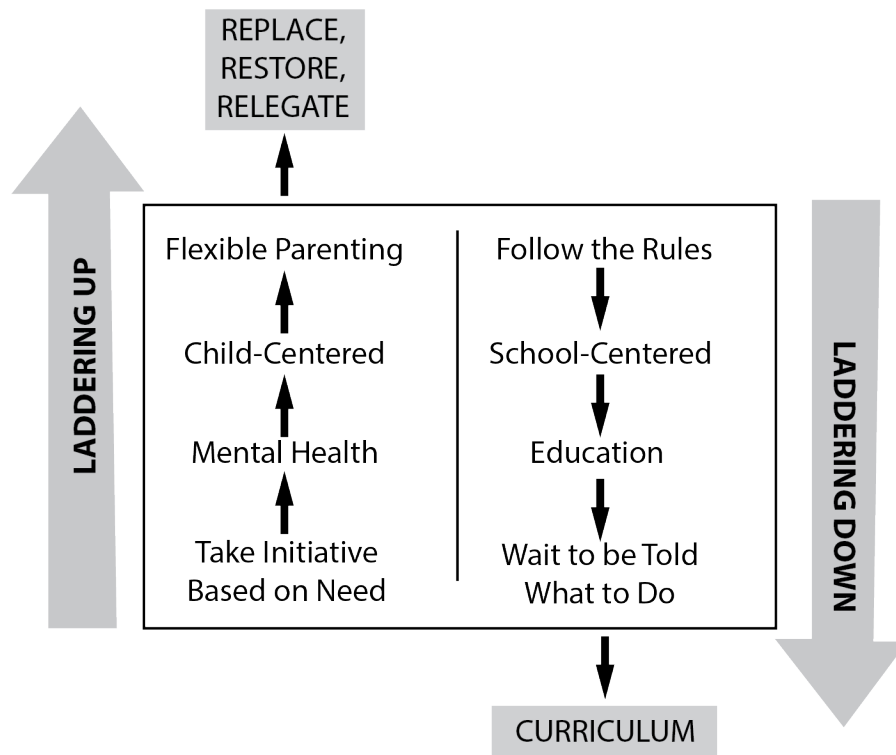
Figure 4. Constructing the Formative Insight

This led to the proposition that there were three possible categories of oscillating response to the home-schooling burden:

- REPLACE: Parents looked for learning aids online and used them to turn everyday events into experiential learning e.g. walking-the-dog-Geography. Children with special interests were encouraged to produce teaching materials about their subject.
- RESTORE: Children identified a preferred task and a formal "learning space" during the day. The child controlled the type of task and duration of the work. Parents provided

snacks and drinks "to boost brain energy" and admired the final product, using language that fostered awareness and problem-solving.

- RELEGATE: Children rated tasks on a 1 -5 scale, with 5 being "waste of my time". Anything rated 4 or 5 (poorly laid out; make-work or repetitive) was summarily deleted. 3 could be kept and considered if it was a topic of interest. Tasks rated 1 or 2 became source materials for REPLACE and RESTORE.

The teachers felt that they had sufficient evidence to support their decisions and gleefully discarded the work they felt they were torturing their school- families with. They replaced it with a letter outlining "the three R's" above and emphasizing the importance of play and mental health, which they sent to both their places of employment and their own children's schools!

Conclusion

Transformative problem-solving enabled a group of families to rise to the challenge of meeting their children's educational and mental health needs in the face of the COVID-19 crisis in the UK in 2020. Through a process of reiterative emotional reflexivity, scaffolded by visual therapeutic personal construct strategies, the group was able to *encounter the threat; develop a systemic problem-space; initiate systemic problem-solving* and *dynamic implementation and monitoring.* The Home Education Project enabled the group to explore their assumptions, beliefs and values around parenting and education; acknowledge a significant emergent need in the form of grief and recognize that the solution to their difficulties lay in seizing the initiative and creating systemic changes in existing educational structures.

This was empowering experience for all concerned and participants have developed strong working and personal relationships, with the result that their children are now in contact online and asking to meet up when lockdown is lifted. Two parents recently undertook a survey of all the children's attitudes to school, which revealed strong similarities between school-attenders and refusers. These results have increased their determination to push for mental health to be a core construct in curriculum and school management, and to foster a system which encourages transformative problem-solving.

The group continues to meet, but the focus has shifted to planning on how to develop a systematized approach to initiating a recovery process in their schools, families and homeschool groups. The proposal includes deliberately scaffolding conversations, using the visual techniques described in this paper; to create a "roadmap with diagrams" that will enable people to listen and connect with the core of one another's narratives. There is a strong belief that recovery needs to start with all the adults in the system, including ancillary and site staff, in order to acknowledge the collective experience and to systematize a transformative climate in schools. It is hoped that by modelling *emotional reflexivity* and *openness to alternative perspectives* for the children, the adults will be able to equip them with some of the resilience and problem-solving capacities that they will need post-COVID 19 and beyond.

References

Burnes, B. (2009). Reflections: Ethics and organizational change–Time for a return to Lewinian values. *Journal of Change Management*, *9*(4), 359-381. http://dx.doi.org.proxy3.noblenet.org/10.1080/14697010903360558

Carmeli, A., Sheaffer, Z., Binyamin, G., Reiter, P. R., & Shimoni, T. (2014). Transformational leadership and creative problem-solving: The mediating role of psychological safety and reflexivity. *The Journal of Creative Behavior*, *48*, 115–135. 115–135. https://doi-org.proxy3.noblenet.org/10.1002/jocb.43

Clariana, R., Engelmann, T., & Yu, W. (2013). Using centrality of concept maps as a measure of problem space states in computer-supported collaborative problem solving. *Educational Technology Research & Development*, *61*, 423–442. https://doi-org.proxy3.noblenet.org/10.1007/s11423-013-9293-6

Deloitte (2020a). Resources for resilient leadership. https://www2.deloitte.com/global/en/pages/about-deloitte/articles/the-heart-of-resilient-leadership.html

Deloitte (2020b). A Human-first approach as you recover and thrive. https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/COVID-19/gx-consumer-COVID-19-shaping-the-future-through-digital.pdf

Deloitte   (2020c).   Build   Back   Better: Respond,   Recover   and   Thrive. https://www2.deloitte.com/uk/en/pages/regions/articles/build-back-better-respond-recover-thrive.html

Eriksen, M. (2008). Leading adaptive organizational change: Self-reflexivity and self-transformation. *Journal of Organizational Change Management*, *21*(5), 622–640. https://doi-org.proxy3.noblenet.org/10.1108/09534810810903252

Fransella, F. (2005). From Theory to Research to Change. In F. Fransella (Ed.), *The essential practitioner's handbook of personal construct psychology.* (pp. 95–106). John Wiley & Sons Ltd.

Freeman, W. (2000). Emotions is essential to all intentional behaviors. In M. C. Lewis & I. Granic (Eds), *Emotion, development, and self-organization* (pp. 209-235). Cambridge University Press. https://doi-org.proxy3.noblenet.org/10.1017/CBO9780511527883.010

Fogel, A. (1993). *Developing through relationships*. University of Chicago Press.

Ford, J. D., Ford, L. W., & McNamara, R. T. (2002). Resistance and the background conversations of change. *Journal of organizational change management*, *15*(2), 105–121https://doi-org.proxy3.noblenet.org/10.1108/09534810210422991

Frijda, N. (1986). *The emotions*. Cambridge University Press.

Gilles, J.., Neimeyer, R. A., & Milman, E. (2014). The meaning of loss codebook: Construction of a system for analyzing meanings made in bereavement. *Death Studies, 38*, 207-216. https://doi-org.proxy3.noblenet.org/10.1080/07481187.2013.829367

Helie, S. (2013). *The psychology of problem solving: An interdisciplinary approach* (S. Helie (Ed.). Nova Science Publishers.

Kegan, R., & Lahey, L. L., (2016). *An everyone culture: Becoming a deliberately developmental organization*. Harvard Business Review Press.

Kelly, G.A. (1955/1991) *The psychology of personal constructs* (2 vols.). Routledge.

Kotter, J. (2008). *A sense of urgency*. Harvard Business Review Press.

Kubler-Ross, E. (1969). *On death and dying.* Macmillan.

Landfield A.W. (1971). *Personal construct systems in psychotherapy*. Rand McNally.

Lewis, M. D. (1996). Self-organising cognitive appraisals. *Cognition and Emotion*, *10*, 1-25.
        https://doi-org.proxy3.noblenet.org/10.1080/026999396380367

Lin, Z., Xia, Z, Ismail, K. M., & Carley, K. M. (2006). Organizational design and restructuring in
        response to crises: Lessons from computational modeling and real-world
        cases. *Organization Science*, *1*, 598–618. https://doi-
        org.proxy3.noblenet.org/10.1287/orsc.1060.0210

Mascolo, M. (2020a). Transforming Higher Education: Responding to the Coronavirus and other
        looming crises. *Pedagogy and the Human Sciences, 7* (1)
        https://scholarworks.merrimack.edu/phs/vol7/iss1/2

Mascolo, M. F. (2020b). A relational conception of emotion and its development. *Emotion
        Review*. Advance online publication. https://doi.org/10.1177/1754073920930795

National Health Service, (2019) *Grief after Bereavement and Loss*.
        https://www.nhs.uk/conditions/stress-anxiety-depression/coping-with-bereavement/

McNaughtan, J. L., DePue, B. W., & McNaughtan, E. D. (2019). The road already traveled:
        Communication advice for higher education leaders. *International Journal of Educational
        Management, 33*, 1431-1441. https://doi-org.proxy3.noblenet.org/10.1108/IJEM-11-
        2018-0351

Neimeyer, R., Anderson, A., & Stockton, R. (2001). Snakes versus ladders: A validation of
        laddering technique as a measure of hierarchical structure. *Journal of Constructivist
        Psychology*, *14*(2), 85-105.

Neimeyer, R., Anderson, A., & Stockton, R. (2001). Snakes versus ladders: A validation of
        laddering technique as a measure of hierarchical structure. *Journal of Constructivist
        Psychology*, *14*, 85-105.

Perlmutter, D. D. (2018). A crash course in crisis communication. *Chronicle of Higher
        Education*, *64*, 26.

Stroebe, M., & Schut, M. S. H. (1999). The dual process model of coping with bereavement:
        Rationale and description. *Death studies*, *23*(3), 197-224. https://doi-
        org.proxy3.noblenet.org/10.1080/074811899201046