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Deming's System of Profound Knowledge and Continuous Improvement

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Abstract

The aim of this review was to conceptualize continuous and lifelong learning within Deming's System of Profound Knowledge framework to explore individual learning processes occurring over time.

Keywords: Deming's System of Profound Knowledge, Continuous Improvement, Profound Learning

Literature Review

Torraco (2005) noted, "Most integrative literature reviews are intended to address two general kinds of topics—mature topics or new, emerging topics" (p. 357). This review gathered and synthesized related literature covering three mature topics: (a) the process of lifelong learning and formation; (b) the process of individual continuous improvement over the course of a lifetime; and (c) Deming's System of Profound Knowledge (SoPK). Particular attention was given to gathering existing literature where these streams of investigation have already intersected in various ways. Continuous improvement theory is a mature topic and has been used primarily to study organizational systems and processes in businesses, education, and government (Deming, 2018). The purpose of the literature review was to explore the applicability of continuous improvement theory as a model for exploring an individual's process of continuous, lifelong learning and personal mastery.

Continuous Personal Improvement in the Context of Learning Organizations

The review is intended to develop an initial conceptual framework resulting from an exploration of existing literature, conceptual models, and theory which address continuous personal improvement. Based on a preliminary review of relevant literature, there appears to be very little scholarly exploration of how organizational learning might be applied to an understanding of individual, lifelong learning, and education. The conceptualization of the learning organization, as offered by Senge's (2009) discipline of personal mastery, provides an entry point to initiate a discussion about the application of organizational learning to individual, continuous learning and improvement.

Personal mastery, which Senge proposed as one of five disciplines contributing to learning organizations, is a starting point. Senge described personal mastery as, "A relentless willingness to root out the ways we limit ourselves from seeking what we truly desire and to continue learning over time" (p. 148) Senge also noted, "People with a high level of personal mastery live in a continual learning mode...it is not something you possess. It is a process. It is a lifelong discipline" (p. 132). Learning in this context is generative, lifelong, and refers to the capability of an individual to create the life they truly desire (p. 132). Exploring individual

lifelong, continuous learning processes may be one way of characterizing personal mastery and individual transformation that occurs over the course of a lifetime. Continuous personal improvement, leading over time to personal mastery, appears to align well with, and should inform, existing explorations of profound learning and human flourishing, and this literature review will explore those relationships.

Senge characterized the term personal mastery as the phrase used for the discipline of personal growth and learning (p. 131). Senge characterized individuals demonstrating personal mastery as those who have: 1) an orientation toward continual growth and lifelong discipline, 2) a clear sense of purpose, 3) an understanding of personal vision, 4) an understanding of what might hold one back from realizing personal vision, and 5) a regular meditative practice. “People with high levels of personal mastery are continually expanding their ability to create results in life they truly seek” (p. 131). People with a high level of personal mastery have a special sense of purpose that lies behind their vision and goals and live in a continual learning mode. They do not arrive at a destination Senge says, rather, personal mastery is a lifelong discipline with a mindset focused on growth. Senge noted people often have great difficulty talking about their visions, therefore developing an understanding of what holds people back from truly understanding themselves is the key to attaining vision. This commitment to understanding is fundamental to moving someone from current reality to a new reality grounded in personal vision. Belief in powerlessness or unworthiness may hold people back or prevent measurable progress toward realizing personal vision (p. 146).

Research on fixed and growth mindsets has demonstrated that people who embrace a growth mindset are more likely to thrive in the face of difficulty and those who hold a fixed mindset may struggle to reach their full potential (Dweck & Yeager, 2020). As Bandura (2018) noted, “Unless people believe they can produce desired effects by their actions they have little incentive to act or to persevere in the face of difficulties. Whatever other factors serve as guides and motivators, they are rooted in the belief that one has the capability to produce effects by one’s actions” (p. 133). Embracing a growth mindset and a belief in one’s own ability to be successful may also contribute to individuals seeking personal vision, high levels of personal mastery, and continuous personal improvement.

Senge’s proposal of personal mastery as a process of continuous improvement that is essential for learning organizations is complemented by Watkins and Marsick’s (1993) model for structuring learning organizations. Their model of continuous learning in workplace settings characterizes continuous learning as cycles of judgment or reflection with action steps, which serve to deepen learning over time. Watkins and Marsick (1993) further noted continuous learning in organizations is enhanced when individuals are proactive, reflective, and creative in their learning, allowing individuals the opportunity to be creative and see things from new perspectives (p. 34).

Deming’s System of Profound Knowledge

Developing a deeper understanding of the inter-related factors that contribute to continuous personal improvement and personal mastery may also be strengthened by incorporating a conceptual framework such as Deming’s System of Profound Knowledge into this discussion. Deming (2018) noted the first step of system transformation is transformation of the individual and that this transformation comes from understanding the system of profound knowledge. “Once the individual understands the system of profound knowledge, they will apply its principles in every kind of relationship with other people” (p. 63), he said. Deming further

noted, “The individual, once transformed, will set an example, be a good listener (but not compromise), continually teach other people, and help people to pull away from their current practice and beliefs and move into the new philosophy...” (p. 64). The principles of Deming’s System of Profound Knowledge (SoPK) may provide insight into an individual’s personal journey of transformation and mastery. Such insight is instrumental to continuous improvement at the individual and organizational levels.

Deming’s System of Profound Knowledge (Deming, 2018) is a quality improvement theory used as a framework for planning and implementing individual and organizational transformation. The SoPK has evolved from focusing on practical business issues to a theory that encompasses individual, organizational, and societal issues (Anjard, 1995). The framework consists of four interdependent components. These components include: 1) appreciation of a system, 2) variation within the system, 3) human behavior and psychology, and 4) theory of knowledge. Each of these interrelated components function as a series of processes and subprocesses within a larger system. These interrelated components are to be considered collectively rather than individually when evaluating a larger system. This literature review considered the SoPK knowledge as a theoretical lens to explore learning and development processes of individuals.

The SoPK is a framework for considering the processes of learning that allow for accumulated, deepened learning. In the case of an individual’s lifelong learning processes, the aim of the individual’s system of learning is to experience enriched, increasingly substantive learning over time. In organizations, the SoPK provides a cognitive ‘map’ or mental model that provides an understanding of the work within organizations (Denzau et al., 2016). Cognitive maps or mental models applied to an individual’s lifelong learning processes may help to understand the systems and processes that lead to deeper learning over time. The interrelated components of the SoPK applied to lifelong learning processes may help to understand the systems that are instrumental in an individual’s lifelong learning, the variation within the systems of lifelong learning, the theoretical views and beliefs involved in learning processes, and how an individual’s behavior and actions are influenced by systems and processes of learning.

Taken together, these interrelated components may help an individual more clearly understand and clarify a personal vision over time. While there are other continuous improvement methods that may also provide a framework for evaluating change over time, the Deming model, when fully understood and successfully implemented, will result in higher quality, higher productivity, lower cost, and systems that are fit for purpose (Deming, 2018; Kennedy, 2020). Deming’s SoPK has been described as a way of thinking and being that is rational, sane, spiritual, and considers the whole, healthy individual, not fragmented in thought and action, as existing within organizations, families, communities, and nations (Baker, 2017). Combining Deming’s SoPK with profound learning theory (Kroth et al., 2022), begins to conceptualize a continuous learning process that occurs over time and allows a pathway for lifelong learning to deepen over time.

Lifelong Learning In The Context of Continuous Personal Improvement

As Bennetts (2001a) noted, “The term lifelong learning has fueled important debates in terms of policy and practice and has produced many interpretations of how lifelong learning might be viewed” (p. 272). For this review, a lifelong learner is defined as one who pursues learning over the course of a lifetime. Some learners will intentionally and volitionally develop more substantive learning practices and outcomes than others. Kroth (2016), developing this

idea, described profound learners as those who pursue deep learning over time. This definition is similar and may be related to the qualities and characteristics of a profound learning (Carr-Chellman & Kroth, 2019). Carr-Chellman and Kroth (2017) continued to build on this idea by introducing the idea of disciplines and practices to the process of profound learning. Qualities of a profound learner include, among other things, being a deep thinker, pursuing on-going growth over a lifetime, maintaining open-mindedness, engaging with the world, and maintaining a mature approach to life (Kroth & Carr-Chellman, 2020). In a discussion of lifelong learning as a process of continuous formation, Kroth et al. (2022) noted, “Lifelong learning as continual formation has substructures such as deformation, reformation, and transformation” (p. 27). As Kroth et al. (2022) further suggested, “A largely unrecognized or discussed variable in determining formation, including transformation, is the learner’s commitment to formative practices that over time form, deform, reform, and transform lifelong learning continuously, recursively, and reflexively” (p. 27). These formative practices, as described by Kroth et al. (2022), are referred to as meta-practices and may include such things as engagement between mentor/mentee or contemplative practices, such as meditation.

Similar to a profound learner’s engagement in lifelong learning processes, an individual’s deeping over time may also be related to an one’s willingness to engage in personal work. Senge et al. (2004) describes personal work as, “Cultivating the ability to be more aware of our thoughts, as they arise so quietly in our awareness, they remain invisible to us as thoughts”(p. 37). As individuals develop the willingness to make cultivation a central aspect of life, meditative and contemplative methods help build capacity to slow down and gradually become aware of thought patterns and streams (p. 37). Contemplative practices, such as practicing mindfulness or meditation, allow individuals the opportunity to awaken to seeing a connection to reality more clearly. In addition to contemplative practices, mentors who remain influential throughout our lives, who see and value us for who we are, and enjoy who we are, contribute to lifelong learning throughout the lifespan (Bennetts, 2001b). Deming’s PDSA cycle serves as a framework to situate a discussion of lifelong learning and continuous personal improvement.

Plan-Do-Study-Act Cycle

Deming (2018) described the Plan, Do, Study, Act (PDSA) cycle as a flow diagram for learning, and for improvement of a product or a process (p. 91). The PDSA cycle as an intentional process can assist in measuring the current state of reality and any gaps that exist in moving toward a clearer personal vision. PDSA cycles provide a method for structuring iterative development of change within complex interventions made up of a series of interdependent steps of which are affected by context (Taylor et al., 2014, p.291). The PDSA cycle, along with developing the practices that routinize continuous personal improvement, seems a rich opportunity to explore lifelong, profound learning, which leads to human flourishing over the lifespan. We propose a conceptual exploration of Deming’s System of Profound Knowledge, combined with the PDSA process geared toward lifelong learning, profound learning, and human flourishing.

Implications for the development of adult education theory and practice

This study provides insight into the relationship of continuous improvement theory to systems of development and formation at the individual and organizational level. These systems shape individual perspectives, worldviews, and personal mastery, and continuous improvement theory can help adult educators understand this process better. In addition, this study suggests

how contemplative practices, mentors, and intentionality contribute to lifelong learning and development. Deming's SoPK offers a constructive mechanism for actualizing continuous improvement at the individual level within systems of development and formation. As such, this study bears directly on the work of adult educators.

Conclusions

This literature review explored continuous personal improvement and personal mastery as a lifelong learning process that may occur throughout the lifespan. Deming's SoPK is a framework to situate the interrelated factors involved in an individual's process of development. Future research could explore the interrelated factors of an individual's continuous personal development and their relationship to lifelong learning, formation, and profound learning.

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