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Recommended Citation

Simpson, Soni and Rohde, Matthew (2013). "Discovering the unexpected: A Comparative Review of Creativity Frameworks in Organizations to Creativity Learning in the Adult Education Domain," *Adult Education Research Conference*.
<http://newprairiepress.org/aerc/2013/papers/44>

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DISCOVERING THE UNEXPECTED: A Comparative Review of Creativity Frameworks in Organizations to Creativity Learning in the Adult Education Domain

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Abstract: Theorizing from the creativity literature within the adult education & organizational management domains, there is a relationship between society, the individual, those in power & the organization. At the intersection of these, Creativity manifests. This introduces the SIPO Creativity Relationships Model.

Background Context

Today, organizations – particularly those in higher education - are faced with ever increasing complexity, economic challenges, rapid technology changes, the shrinking of the world through globalization and increasing diversity of adult needs. The question is *how can organizations face the challenges ahead?* In an extensive analysis of data gathered through in-depth one-on-one interviews with 1541 global CEOs, IBM found that *creativity is the top leadership quality needed today to cope with and to create change* (IBM 2010). Inspired by this, this study is a part of a larger investigation into the intersection of creativity, change, innovation and learning.

Thematic Comparison

Creativity is not an insulated topic, but interacts with a variety of other concepts. The thrust here is on themes in reviewed publications focusing on creativity in organizations & higher education.

Accelerating Complexity Creating Life Long Learning Needs

A techno-economic perspective has become the driving force for growth in modern civilization. The five historical activities that individuals engage in to assist with human civilization progression are Discovery, Invention, Creativity, Innovation & Development. The socio-economic dynamics of these are stronger & faster than ever (Badran 2007). Society's moving from reproductive learning in an industrialized society rapidly through performative learning (which links creativity, action & problem solving) to the late modernity age of super-complexity which adds communication, increased collaboration and direct democracy to organizational management (Alkeaid 2007). Knowledge & skills have become the drivers of innovation & change; therefore, organizational performance is talent & creativity dependent. The increasing complexity also leads to higher need for creative & cultural education to develop the attitudes & skills required so employees can adapt to survive; thus, creating the imperative for them to become lifelong learners (Simmons & Thompson 2008, van der Veen 2006). Sternberg (2009) states the WICS model (wisdom, intelligence and creativity synthesized) for liberal education addresses that the citizens of the world need creativity to form a vision of where they want to go.

Core and Cultural Values Impact on Creativity

With globalization, the role of core & cultural values in creativity becomes a concern. The core human meaning of creativity integrates diversified knowledge in a new synthesis based upon meaning of life notions (van der Veen 2006). Creativity's been described as a life force, akin to the Eros concept (Clegg 2008) and involving humanist values (Beach 2006). Fleming (2008) explores attachment theory and the inextricable link between society & the individual and how they process new ideas. Interpreted as a social construct, how communities judge values & connect or validate how knowledge is produced or used has influence on the creative process (Thompson 2009). For example, study respondents in Hong Kong believed creativity was dependent on birth order, effort, health & logical thinking, and after a certain critical period, couldn't be developed. Whereas their Singapore counterparts believed intelligence was a creativity pre-condition, yet everyone can be creative in some way – which is driven by Singapore's value of diversity (Seng, Keung & Cheng 2008). Furlong (2009) demonstrates a relationship between bilingualism, biculturalism, metaphorical thinking & creativity and Leung, Maddux, Galinsky & Chiu (2008) demonstrate empirically that multicultural experiences enhance creative performance, creativity supported cognitive processes and ideation.

Training for and Fostering Creative Learning Environments

Societal sustainability depends upon industry innovation & progress (requiring creativity). Badran (2007) notes the combination of business support, SME creativity & teaching enhanced engineering creativity in higher education serves as a pillar for techno-economic progress. Training has a powerful effect on organizational creativity. Creativity instruction may enhance originality, closure resistance & elaboration (Gilbert, Preshaw, & Ivy, 1996). Creative problem finding can be enhanced by training (Fontenot, 1992). Wang & Horng (2002) echo training importance noting it can change cognitive type, improve creative thinking, work performance, and expand fluency & thinking originality. Alkeid (2007) explores community college ISO 9000 adoption & allows creativity can be facilitated in this learning environment but dictatorial mandates could limit creativity. Clegg (2008) warns that within the World Bank's reform agenda, creativity is reduced to an overused buzzword within academia & must be guarded jealously within the moral discourse of maintaining universities as a space to understand & reflect upon the impact of the world around us as well as to seek human potential. Marginson (2008) explores radical-creative imagination & the importance of self-determination in academic freedom. McWilliam & Dawson (2008) propose a radical re-engagement of academic pedagogy challenging academy traditional & progressive thinking. Further, Beghetto & Kaufman (2009) propose a metaphor of 'intellectual estuary' where multiple streams of creative & academic interpretations thrive & join together with overlapping goals (not separate paths). Advanced academics should support student learning & creativity simultaneously.

Creativity and Academics in Higher Education

Creativity for academics can be examined from the perspective of teaching creatively, enhancing creativity in research/academic activities & teaching students to think creatively. Although there is fascination with creativity, it isn't in daily academic discourse (Kleiman 2008). However, more creative teachers have a better understanding of their role as teachers (de Sousa 2007). Creative teaching can engage students in narrow & dull curriculum. Thompson (2009), though, warns of the challenge of employing creative teaching within increased focus on instrumental output. Bluteau & Krumins (2008) found a key in facilitating creativity among academics is to add a new dimension through introducing

learning technologists, whose skills assisted teams in embedding innovation into curriculum. Using creative non-textbook methods increases skill development, deepens content understanding & provides greater inclusive ways of knowing as text book learning could be privilege based (Mark 2008). Simmons & Thompson (2008) found higher social classes, such as teachers & learners in elite institutions, enjoyed more autonomy & cultures conducive to creativity. Baer explores creativity in an interview & suggested the most fun parts of research - exploring, planning & designing - clearly links to the creative process (Henshon 2009). Finally, if an academic wishes to promote creativity among students, they must live within a framework of ambiguity, remain committed to humanistic education & seek to assist students in liberating themselves from outmoded habits of thinking (Clegg 2008).

Learning Environment and Divergent Thinking

The need for convergent thinking (finding the one right answer) required in traditional jobs limits learners returning to education settings ability to develop divergent thinking and critically explore 'many right answers' required in creative problem solving (Haier & Jung 2008, Kirton 2010). Organizational literature finds divergent thinking is powerful during the early stages of problem solving as it influences idea generation & fluency significantly; however, it has little idea implementation effect (Vincent, Decker, & Mumford, 2002). From a behaviorism perspective, creativity requires a rich learning environment yet may be limited by external factors (rewards, etc). Alternatively, in a constructivist (double-loop) learning environment, creativity is cultivated as learners construct reality, knowledge & skills through their experiences & participate in critical & creative thinking (Alkeaid 2007). Business culture also can powerfully affect creativity. Environments with complex jobs, supportive & non-controlling managers, as well as stimulating & competitive coworkers, seem to foster creativity & innovation (Oldham & Cummings, 1997). Isaksen, Lauer, Ekvall, & Britz (2000) note cultures including challenge & involvement, playfulness or humor, and idea support were best for innovation. Additionally, West (2002) and Ng, Lam, & Feldman (2010) postulate intra-group safety & psychological safety are indispensable for creativity and innovation.

Motivation, Communication & Rewarding Creative Behavior

Harding (2010) posits that institutions with a culture of creative behaviors & thinking are more likely to prepare good teachers of creativity. Creative experts & policy makers are important in teacher preparation, evaluation, research & policy. Considerations need to be given to reinforcement as learners tend to repeat activities that give them desirable results, thus, preventing trial of new actions (Alkeaid 2007). External rewards may neglect the importance of intrinsic motivation conduciveness to creative performance. Whereas Selart et al (2008) suggest engagement-contingent rewards are more effective than performance-contingent rewards & posit autonomy as the salient explanation; thus, rewards may trigger intrinsic motivation but not self-regulation. Time & space may not enhance innovation but the use of financial funding may (Bluteau & Kruminis 2008). Additionally, the mood frame used communicating creativity expectations must be consistent with the problem to be solved or the task frame (Baas, DeDreu & Nijstad 2008). Creativity output can be made much easier with properly communicating its importance. Clearly tying rewards to creative performance (Eisenberger, Armeli, & Pretz 1998) and instilling creativity importance in employee's job requirements (Unsworth, Wall, & Carter, 2005) can foster creativity. In fact, simply mentioning creativity (Shalley 1991) or giving instructions to be creative (Reiter-Palmon & Illies, 2004) bolsters creative performance.

The Individual Learner and Creativity

Baer (2010) says the notion that we either have creativity or don't is limiting & initial requirements are needed to be creative. In addition to intelligence, general areas such as communication/writing & math/science have influence on domain specific creativity assessment (Henshon 2009). Seng, Keung & Cheng (2008) feel creativity is statistically rare. Both positive & negative affectivity can predict a creative personality but higher nervousness may lower creativity traits (Charyton, et al 2009). A mood-creativity meta-analysis found activated mood states increased creativity &, counter to popular belief, the relaxed aha! state did not (Bass et al 2008). Haier & Jung (2008) posit, although there is not clear consensus as to which part of the brain is more critical, the posterior brain regions & diffuse frontal brain activation are important to creative task performance. Researchers agree that intelligence, particularly domain specific knowledge & skills, is needed but not sufficient to ensure creativity.

Social Interaction Impact and Management Relationships

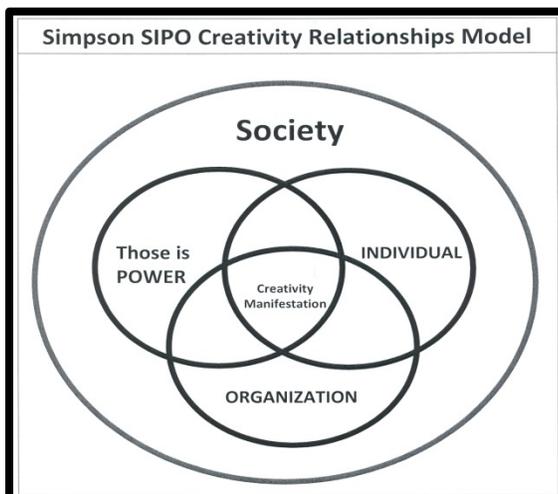
Relationships play a role in how creative people are. However, weak relationships may be more effective at fostering creativity because of an employee's ability to think for them-selves, versus relying on strong relationships (Perry-Smith, 2006). Moreover, weak ties might be less redundant in nature, resulting in diverse relationships free of groupthink (Hulsheger, Salgado, & Anderson, 2009). Baer (2010) confirms conformity can deter creativity, and Perry-Smith & Shalley (2003) note too many weak ties can burden creativity. Holmes (2007) links workplace humor, creativity & relationships. Scott & Bruce (1994), state stronger relationships between supervisors & employees can bolster innovative behavior. Janssen (2005) echoes this noting supervisor support is essential to employee creativity/innovation.

Dissatisfaction Influence

Some negative factors, such as dissatisfaction in the workplace, can foster creativity. Zhou and George (2001) found dissatisfaction can cause employees to be more creative, especially when they have a high level of commitment to the organization & coworkers who provide feedback. Innovation might serve as a coping mechanism for dissatisfaction (Janssen 2003). Once the employee innovates, more dissatisfaction and coworker conflict might occur, however.

Introducing the SIPO Creativity Relationships Model

Theorizing from the literature, there is a relationship between society, the individual, those in power and the organization itself. At the intersection of these is where creativity manifests. Thus, the following is the introduction of the SIPO Creativity Relationships Model. Each of these & their relationships will be detailed in the larger study of which this is one component. Further questions center around how do differences in cultural values impact creative learning, how do environments enhance collective creative problem solving, what is the neural basis for creativity and how can critical problem solving become a greater component of life long learning?



SIPO Creativity Relationships Model

Society influences the relationship between individuals, those in power and organizations. Creativity Manifests at the intersection of these components:

- **S-** societal values and framework
- **I-** the individual ability, motivation and readiness for creative problem solving
- **P-** the communication by, influence of and relationship with those in power inside the higher education institute or organization
- **O-** the organization itself, including its structure, values and systems

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