Formal and informal learning transfer in the workplace

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ABSTRACT

Both employees and organizations invest significant amounts of time, energy, and funds while promoting knowledge development as a fulcrum for increasing reflexive transformation, gaining higher cognitive skills, and achieving both organizational and workforce members' performance goals. Our paper advocates multi-faceted and interactionist adult learning approaches designed to stimulate learners' motivational dispositions as they transition to and from formal and informal learning environments.

Keywords: Formal learning, informal learning, reflexive transformation, motivational disposition

INTRODUCTION

Our paper investigates the theoretical conceptual framework associated with formal and informal learning transfer in the context of workplace and organizational collectives. Additionally, we seek to add to knowledge regarding learners' applications of knowledge and experiences when stimulated by situational interest, societal context, or organizational climate. The goal of our paper is to investigate theories encompassing adult learners' self-regulation of knowledge development while transitioning to and from highly structured, organizationally supported, formal learning centers, to informal, unstructured, learning environments. Our focus on workforce transfer of learning adds to adult educators' and corporate training officers' knowledge network in the use of stimuli to spark learners' dispositions and to improve collective performance. Finally, our paper provides interpretations for applied research where the conclusions and implications may lead to new constructs on reflexive transformation and learning transfer.

Why Investigating Formal and Informal Learning Transfer Matters

Ford and Weisbein (1997) stressed the importance of a multifaceted approach where the analysis of workplace learning transference includes the exploration of several concepts and theories. The Foundational Science Research Unit (FSRU) (2014) proposed organizations require an interactionist framework to fully appreciate the vast differences in workforce members' formal and informal learning needs. Holton, Chen, and Naquin (2003) highlighted in order to increase levels of formal and informal workplace learning transference, organizations needed to develop customizable approaches that stimulate employees' learning transference within both stable and static workplaces and unstable and quickly evolving social constructs.

For action teams operating in unstable constructs such as first responders, military personnel, and medicals teams, Bourdieu (2012) proposed formal and informal learning transfer as being unique and essential to the doxa of solidarity. Sweetman (2003) and Taber, Plumb, and Jolemore (2008) described action team formal and informal learning as situational, where members faced nonlinear, unstructured tasks requiring them to forego their formal learning

identities. In order to meet evolving mission tasks, action team members applied a reflexive transformation approach. Bourdieu (1990) described reflexive transformation as members gaining a "feel for the game" (p. 52) where individuals' and teams' cognitive structures independently and collectively react and respond to unstable conditions. Taber et al. (2008) found members undergoing a reflexive transformation approach often gained higher echelons of proficiencies when they transitioned to an unstructured, informal learning habitat. To meet the training demands associated with dynamic organizations, educators and training officers developed gradual formal to informal learning approaches where learners progressed from a highly structured, regulated, formal learning environment, to an intensive, action-oriented, informal learning construct.

THEORETICAL CONCEPTUAL FRAMEWORK

Our theoretical framework served as the foundation for understanding the cyclical pattern of formal and informal learning transference. Our research indicated a lack of consensus in literature regarding; (a) how workforce members self-regulate their knowledge development and (b) at what point in the formal/informal learning spectrum do individuals gain the essential competencies to perform optimally (Decuyper, Dochy, & Van den Bossche, 2010; Taber et al., 2008; Williams, Gruber, Sutcliffe, Shepherd, & Zhao, 2017). We sought to add to literature regarding learners' application of knowledge and experience when stimulated by situational interest, societal context, or organizational climate.

Classical View of Learning Transfer as a Single-Layered Concept

The classical crux of transfer of learning concluded if learners were taught X, then learners implicitly applied X when confronted with unstructured tasks or issues (Baldwin & Ford, 1988; Carraher & Schliemann, 2002; Halpern, 1998; Zohar, 1994). Chatterjee, Pereira, and Sarker (2018) presented formal learning was founded upon the premise that all individuals possessed the ability to transfer implicit knowledge from one task to another. Nonaka (1994) suggested humans' transference of explicit knowledge to tacit knowledge was a natural, basic, and cognitive process.

However, Engle (2012) and Halpern (1998) cited flaws associated with traditional theorists conceptualizing formal learning as the end-all approach to stimulating individuals' and collective teams' knowledge development. Halpern presented most training courses focused on students' learning content as central to their job descriptions. Billett (2004) argued confining learning transfer to formal learning implied a causal relationship between structured learning environments and changes in employees' performances. This causation failed to account for nonspurious relationships associated with human agency, social construct, organizational climate, and learners' self-motivations. Carraher and Schliemann (2002) suggested empiricists' concepts of learning transfer mirrored Piaget's theory of learning and the process of assimilation and accommodation.

Recognizing the limitations associated with the classical concept of learning transfer, investigators sought ways to expand inquiries beyond traditional methodologies and simplistic, quantitative research designs. As part of their investigations into single-layer learning, researchers often applied a quantitative research design with the hypothesis where if the learner demonstrated the "correct" response, then transfer of learning occurred. These research designs proved inconclusive as studies failed to account for normative or non-

normative human behavior. Lobato's (2006) actor-oriented perspective served to fill in gaps associated with single-layer learning transfer concepts.

Actor oriented perspective

By applying Wagner's (2010) transfer-in-pieces constructivist approach and Lobato's (2006) actor-oriented perspective, researchers gained greater insight into individuals' interactions with situational events. Using a time-space continuum, investigators recorded how learners leveraged their prior experiences, whom and when learners discoursed with other members, and what ways members executed their tactical implementation plans (Lobato, 2012). Reed (2012) also highlighted a major distinction between implicit, expert-defined, correct responses and learners' explicit, tactical implementation plans. Learner-authored tactical implementation plans reflected individuals' learning transference through the lens of social construction. Investigators broadened their inquiries to mixed methodology designs recording field notes on the sample populations' actions regardless of the members' abilities to successfully transfer learning (Reed, 2012). Through the use of the actor-oriented perspective, researchers gained multi-layered perspectives and deeper conceptualizations of how members' reflexive transformation became stimulated.

Learning Transfer as a Multi-Layered Social Phenomena

Versus exclusively framing workforce members' knowledge development to a formal designated space and time, our research indicated multiple factors influence learners' formal and informal learning. These factors included socialization externalization, psychological state, and motivational dispositions (Barnett & Ceci, 2002; Chatterjee et al., 2018; Engle, 2012; Ford & Weisbein, 1997; Lobato, 2006; Renninger & Hidi, 2016). Smaldino (2014) emphasized learning transfer was cyclic in nature, shaped and constrained by culture and language, social interactions within an organization, and experience, timescales. Bourdieu (1984) and Halpern (1998) presented learner's' self-regulation of learning, embodiment, and experiences within social habitus played instrumental roles in learning transfer. As members mastered knowledge of lower level processes and situations, they progressed into higher echelons of learning transfer. Ford and Weisbein (1997) stressed the importance of a bricoleur approach where the analysis of learning transfer included the incorporation of conceptual frameworks encompassing inclusion of higher-level tasks and the use of theoretical and operational methodologies.

FOSTERING LEARNING TRANSFER IN THE WORKPLACE OR SITUATIONAL ENVIRONMENTS

Brandsford and Schwartz (2001) concluded that workplace or situational context impacted the degree in which learners manifested principles and demonstrated reflexive transformation. Fundamentally, adult educators and training officers did not impart knowledge. They provided the learning environments that fostered workforce knowledge creation. Our paper focused on three organizational concepts which demonstrated potential for stimulating employees' formal and informal learning transfer. We examined literature associated with; preparation for future learning, action identity theory, and motivational disposition.

Preparation for future learning

The preparation for learning concept examined how learners actively transcend from "knowing how" to "knowing with". Broudy (1977) presented by "knowing with", members applied their knowledge and experiences when confronting new problem sets. Nonaka (1994) framed organizations' roles in learning transfer as workplaces amplifying "the knowledge created by individuals and crystalizes it as a part of the knowledge network of organization" (p. 17). As the workforce performed tasks or encountered similar engagements, they demonstrated attributes to "let go" of previous ways of doing and adopted new applications to accomplish objectives (Goldstone & Day, 2012). Action identification theory expanded upon the preparation for future learning concept by examining learners' behaviors when stimulated by uncertain situational contexts.

Action identification theory

Vallacher and Wegner (1987, 2012) described action identity theory as the interplay between how learners perceived their role or sensemaking and their reactions to external stimulus. During unstable situational experiences, workforce members adjusted their frames of reference in response to the conditions. Members demonstrating a high level of dominant identity (confident of their mastery) reacted to uncertain conditions using a "knowing with what effect " (Parkin, Jarman, & Vallacher, 2015). Schwartz, Chase, and Bransford (2012) described this higher level as a positive learning transfer where members "see the old in new" (p. 205).

In contrast, employees sensing fear of failure or an avoidance approach when confronted with non-linear problem sets chose to retreat to lower cognitive levels or an over-generalization of "knowing how" (Schwartz et al., 2012). In their study of firefighters, Taber et al. (2008) cited the dangers associated with members becoming too reified in the application of "knowing how" to resolve chaotic situations. The workforces' rigid adherence to directive documentation impaired members' abilities to codify the multiple parameters surrounding the situation. In turn, "the reifications inhibit dynamic collaborative learning processes so important for coordinated action" (Taber et al., 2008, p. 283). A key aspect of both preparation for learning and action identification theory was learners' motivational dispositions in actively acquiring new knowledge and cognitive skills.

Motivational disposition

Renninger and Hidi (2016) defined motivation as "the desire or will to do something" (p. 71)**.** Belenky and Nokes-Malach (2012) presented motivational constructs served as conduits to understanding situational perspectives, to higher or lower cognitive processes, and to individuals' self-concepts. Motivational disposition pertained to learners' characteristics and psychological, cognitive, and affective states. Given sufficient triggers of interests, members engaged or reengaged in knowledge development regardless of whether the information pertained to their job descriptions or skill sets (Renta-Davids, Jiménez-Gonsález, Fandos-Garrido & González-Soto, 2014).

Literature indicated that individuals having a high level of motivational disposition presented a positive correlation to achieving higher levels of knowledge transfer (Applet, Milch, Handgraaf, & Weber, 2011; Belenky & Nokes-Malach, 2012; Daffron & North, 2006; Tai, 2006; Weissbein, Huang, Ford & Schmidt, 2011). Daffron and North's (2006) workplace study on software company professionals posted similar results where employees expressed

high interest in voluntarily attending company training. The employees' primary motivations were to gain additional leadership, communication, and cross-cultural skills sets.

In contrast, Belenky and Nokes-Malach (2012) presented learners with high cognitive abilities but low motivational disposition often struggled when confronted with unstructured problem sets. Daffron and North (2006) and Renta-Davids et al. (2014) noted employees demonstrating lower levels of motivation often required organizational interventions. While these learners possessed the cognitive skills to recognize new or similar situations, they lacked the drive and confidence to encode events and to resolve non-linear tasks. Literature indicated that learners' motivational disposition was also determined by the members' motivational interest and learning approaches.

Interest for motivation: Performance and mastery approaches

Scholars described learners' motivational interests as either performance-approach or mastery-approach (Deshon & Gillepsie, 2005; Elliott & McGregor, 2001). Ames and Archer (1988) and Renta-Davids et al. (2014) highlighted the importance of educators and training officers being attuned to employees' performance approaches. The authors found employees scored higher levels of learning transfer if the training pertained to job performance improvements or if the additional skill sets increased learners' competitiveness with other peers.

Alternatively, while some employees communicated motivational interests in performance approach, they resisted dedicating the time and effort necessary to attend formal learning events. Members' resistance increased when faced with peer pressure and risks associated with being unable to apply new learning to non-linear or uncertain tasks. In these cases, learners demonstrated work avoidance approaches where employees demonstrated minimal efforts towards participating in formal learning events or seeking new knowledge (Harackiewicz, Barron, Tauer, & Elliot, 2002).

Learners demonstrated a mastery-approach goal by independently seeking new and higher levels of competencies. Mastery-approach employees were self-actualized where members independently pursued knowledge development based on their self-esteem, internal attributes, and drive to enhance personal cognitive skills (Markus & Kitayama, 1991). They were dispositioned towards resolving unstructured problem sets, open to possibilities of failures, and easily shed intimidating criticisms from peers. Mastery-approach learners based their formal and informal learning choices more upon their self-construal versus being influenced by their social habitus.

However, Murphy and Alexander (2000), Hidi and Harackiewicz (2000), and Renninger and Hidi (2016) highlighted that performance and mastery approaches were not necessarily dichotomous or polarized in nature. Murphy and Alexander (2000) cautioned against educators or training officers typecasting goal orientations as having positive (mastery-approach) or negative (performance approach). Both approaches sought to identify learners' unique and distinct motivational disposition and to serve as an enabler of learning transfer. To better understand learners' motivational disposition and behaviors, Deshon and Gillespie (2005) suggested educators and training officers utilize tools associated with motivation action theory.

Motivated action theory

Deshon and Gillespie (2005) defined motivated action theory as a " model of goal-oriented behavior in achievement contexts" (p. 1105). Similar to concept mapping, mental models, and course of actions matrices, learners authored implementation plans to stimulate cognitive thinking. Deshon and Gillespie (2005) highlighted the most important element of motivation was learners' pursuits of goal-oriented behavior over time, spatial context, situational externalization, and habitus. Learners' implementation plans provided educators and training officers visual evidence of workforce members' dispositional intentions (e.g., performance-, mastery-, and avoidance-approach orientations). Conversely, implementation plans served to signal negative barriers to growth where learners demonstrated their tolerance for risk.

Tolerance for risk: promotion versus prevention

Scholer, Fujita, Zou, Stroessner, and Higgins (2010) suggested individuals' tolerances for risks played an instrumental role in formulating learner's action identify and motivational disposition. Scholer et al. (2010) presented individuals were pre-disposed towards either a promotion focused or a prevention focused motivational disposition. Promotion focused members resonated towards learning opportunities. Learners exhibited higher levels of action identities, possessed greater self-efficacy, and readily accepted risks (Bandura, 1997; Knight, Durham, & Locke, 2001). By aggressively pursuing training and education opportunities and increasing their knowledge development, promotion focused learners readily deciphered changes in situational environments, identified similarities to other situations, collaborated with peers and subordinates, and were more likely to accept risks when deploying implementations plans.

In contrast, prevention-focused members, when confronted with chronic or situationally induced events, placed greater emphasis on choices that best maintained the status quo (Scholer et al., 2010). Fearful of loss in value or negative repercussions from peers and supervisors, members were hesitant to suggest or to execute competent but risky decisions. In some cases, personnel manifested signs of impostership anxiety. They perceived their peers and supervisors idealized them as subject matter experts while the learners themselves felt underwhelmed and lacked technical competence in their fields (Brookfield, 2018). Additionally, members may perceive risk seeking actions as being detrimental to their performance approach motivational goals. Thus, prevention focus individuals retreated to lower level, "know how " approaches as their primary motivational goal. They gravitated towards conservative, protocol driven responses.

CONCLUSIONS

Adult educators and corporate training officers serve as knowledge enablers charged with understanding the multiple lanes of learning transfer and being attuned to workforce members' motivational dispositions to actively pursue or avoid higher level learning levels. Ways to enable transfer of learning are predicated upon understanding the societal context of learners' needs and habitus and applying an interactionist and multifaceted approach to knowledge development. Our paper seeks to engage educators, training officers, and learners in both the awareness and practice of ways to stimulate formal and informal learning within a variety of stable and unstable environments.

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