

Exploring Conditions for Transformative Learning in Work-Integrated Education

by

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B.A., University of Alberta, 1983

M.B.A., University of Alberta, 1987

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### **Abstract**

A qualitative study was undertaken that explored the conditions for transformative learning (Mezirow, 2000) in a specific form of work-integrated education (WIE), co-operative education, towards the development of a theoretical model. The research question considered was “What pedagogical and workplace practices available during WIE contribute to transformative learning?” WIE students, supervisors and their co-op coordinator were the participants in this study. Four case studies were developed based on evidence from interviewing these participants at the beginning and end of one work term. Aggregated data from the coordinator, student and supervisor interviews were analyzed. The Kelly repertory grid was used as a way to elucidate and rate participant constructs of transformative learning during WIE. Activity theory, which theorizes that expansive learning is a result of a dialectic, mediated process embedded in a socio-cultural context (Engeström, 1987), provided the theoretical framework to examine these constructs and their relationship to the conditions for transformative learning. The findings from the study revealed several results that add to our theoretical models for WIE. First, WIE, including co-operative education, relies heavily on the constructivist perspective of Kolb’s Experiential Learning theory (Kolb, 1984) yet the participants cited transformative learning from critical-cultural, psychoanalytical, situative and enactivist perspectives (Fenwick, 2000) with each perspective providing a different lens through which critical reflection, the antecedent to transformative learning, could be supported (Mezirow, 1998). Second, critical reflection, in addition to being supported from a variety of perspectives, was found to occur as a result of the resolution of contradictions found in the dialectic and mediated processes explicated by activity theory’s cycle of expansive

transition (Engeström, 1987). Third, the enablers (mediators) most involved in contributing to this process were: opportunities for work and learning, a supportive environment, student capabilities, co-workers, supervisors, and assessment and reflection practices. Fourth, within the context of WIE, activity theory introduces the dimensions of time, context and transformative processes (Keengwe & Jung-Jin, 2013) to our understanding of how transformational learning occurs and results in the transformative outcomes of self-formation (Dirkx, 2012), and social transformation (Merriam, Caffarella, & Baumgartner, 2007). Fifth, the integration of these transformative outcomes into the WIE or workplace was dependent upon the time and value given to transformative processes, institutional requirements and a positive emotional environment that supported the resultant changes to the students' world view and ability to act (Avis, 2009; Hanson, 2013; Holman, Pavlica, & Thorpe, 1997; Taylor, 2008). The implications of these findings are that WIE theoretical models include considerations of: perspective, socio-cultural context, dialectic and mediated processes and creating a positive emotional space to support the critical reflection necessary for transformative learning. Including these considerations shifts WIE theory from a constructivist perspective towards an enactivist perspective with the potential that programs intentionally support both students' individual change and the social change of organizations where they work and study. Furthermore, adopting a view of WIE as an interaction between two systems, with the resultant "knotworking," "boundary spanning" and "co-configuration" (Engeström, 2009), opens up possibilities for innovation and renewal in WIE programs and workplaces.



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## **Dedication**

To Andrew, Adrienne and Connor who joined me on this journey—thank you for your steadfast support and love.

## **Introduction**

Across the globe, hundreds of thousands of students are engaged in work-integrated education (WIE), a form of experiential education that intentionally connects the education of those students to the world of work through a partnership between academic institutions and workplaces. Academic institutions establish WIE programs as one way to enrich students' educational experience and support retention. Workplaces participate anticipating students' contributions to current workplace productivity and to the workplace's future recruitment needs. Students value the relevancy that connecting to the world of work can bring to their studies and the chance to build their professional skills and networks (Ipsos Reid, 2010; Sattler, Wiggers, & Arnold, 2011).

The typical WIE program is made up of a number of educational and administrative components that include, in addition to students as the participants, academic programs and their personnel (faculty and WIE staff), the work settings in which students are placed and their personnel (supervisors and co-workers). As well, there are the components that are specific to the academic setting (e.g., curriculum and assessment practices) and work placement setting (e.g., employment guidelines and assessment of work performance) and those that connect or span the two (e.g., communication among supervisor, coordinator and student, development of workplace learning outcomes, and work term reports that are part of the academic and work placement assessment). The intention is that all of the component parts work together to support student learning, as the critical outcome. The complexity resulting from the integration of the academic and workplace systems is significant and poses a challenge to ensure effective WIE educational practices in both settings.

The development of WIE, as a curriculum model that has both educational and career benefits has been fundamentally influenced by the writings of Dewey (1938) and constructivist learning views that reflect the assumptions of Kolb's experiential learning theory (1984) Kolb's widely accepted theory suggests that students learn through experiences passing through four stages of cognitive activity: concrete experience, reflection, abstract conceptualization and active experimentation (Kolb, 1984). This theory represents each of the four stages in the experiential learning cycle as isolated, solitary pursuits of the learner, whereas contemporary perspectives on experiential learning posit that the learning process is dialogic, mediated and embedded in a socio-cultural context (Blackler, 2009; Holman et al., 1997). Among other assumptions of Kolb's theory of experiential learning, these four stages of cognitive activity have been highly influential in the design and implementation of WIE practice.

While some WIE research has addressed the educational benefits of WIE programs to the student and factors contributing to these benefits (Van Gyn, Cutt, Loken, & Ricks, 1997a), this body of research has two main limitations. It tends towards examining how these benefits influence workforce attachment or academic achievement (Dressler & Keeling, 2011) and does not reflect the expansive types of learning that is documented in the WIE literature. Research that considers how WIE fosters significant learning, as described by transformational learning theory (Mezirow, 1991) is relatively underdeveloped (Van Gyn & Grove-White, 2011). Transformative learning, which is generally enacted in adult populations, reflects the meaning that the learner makes out of (educational) experiences and the processes that lead to paradigmatic shifts in perspective (Taylor, 1997). Grounded in the intentional use of critical reflection on a perplexing

problem, 'learning is understood as the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one's experience in order to guide future action' (Mezirow, 1996, p. 162). Critical reflection can be enacted through a variety of perspectives (narrative, systemic and organizational) that allow for transformation at the personal, system and organizational level (Mezirow, 1998). The transformed learner acts based on their own "purposes, values and feelings," rather than those of others, with the view to gaining greater control over their lives to become "socially responsible, clear-thinking decision makers" (Mezirow, 2000, p. 4).

As shown in several studies of learning in higher education programs (Feinstein, 2004; King, 2004; MacLeod, Parkin, Pullon, & Robertson, 2003), a highly influential factor in the development of transformative learning is the engagement in "real life" experiences in which disorienting dilemmas and actual consequences naturally occur. Such is the nature of learning in WIE and it is logical to predict its occurrence and to investigate the transformative learning experiences of students in WIE. Examining WIE from a perspective that goes beyond the instrumental, pragmatic outcomes of career or academic achievement towards a view of WIE that acknowledges and accounts for its transformative potential would not only substantiate the claims made on the educational value of WIE but would also add to needed theory building for WIE (Bartkus & Higgs, 2011).

A second general limitation of the research on the educational impact of WIE is that the main variables in the WIE system that are integral to the learning process (i.e., institutions, workplaces, students) are viewed in isolation from each other, and from the socio-cultural context within which that learning occurs (Eames & Cates, 2011). This

particular limitation is at odds with contemporary explanations of learning that appeal to systems theory to reflect the complexity of the learning processes. In a systems view, determining the specific influence of individual elements on the system's outcome or attempting to predict an outcome based on a particular state of an element in the system is somewhat futile as outcomes are a result of the interaction of all elements in the system. It is the complex collective action of system elements that gives rise to particular outcomes, or "emergent properties" of the system.

Taking a holistic or systems view of the context and processes of learning in WIE acknowledges the complexity that is evident in the organization of this educational model. Despite the formidable task of examining the conditions and factors, and their interactive outcomes that led to the emergence of transformative learning in WIE, the field must do so otherwise we are unable to design, modify or evaluate, in any meaningful manner, the educational experiences we offer to students. Furthermore, if the outcomes of transformative learning are not fully integrated with the WIE system, we limit the opportunity for our institutions, workplaces and students to continue to learn after the WIE experience is concluded, and thus be responsive to the potential for change both at the individual and social level.

An emerging theoretical framework that has been applied in WIE research (Hodges, 2011; Peach, Cates, Jones, Lechleiter, & Ilg, 2011) to reflect the complex interactivity of the WIE system is activity theory (Engeström, 1987). Similar to Kolb's experiential learning theory, activity theory is based in constructivism, but adds the dimensions of time, context, and transformational processes (Keengwe & Jung-Jin, 2013). Activity theory considers these systems as supporting artefact-mediated activities

that are object oriented, comprised of a multiplicity of perspectives, have historicity, see contradiction as a source of change and development and have expansive transformation outcomes based on the resolution of these contradictions as the outcome (Avis, 2009).

The understanding of how people transform objects into outcomes is the goal of activity theory (Keengwe & Jung-Jin, 2013). Furthermore, activity theory and transformational learning theory share common goals of fostering both individual and social transformation (Mezirow, 1991; Taylor, 2008) and as such there is congruence in using activity theory to interpret transformational learning. In addition, examining the processes of WIE with an activity theory perspective would enable the consideration of the complexity of the interrelated, interactive WIE system and may lead to a clearer understanding of the production of the various WIE outcomes, the most important of which is transformative learning. In particular, examining critical reflection in the WIE experience through an activity theory lens may allow us to consider the individual's critical reflection within the context of a system, made up of mediating influences, multiple perspectives, historicity, relationships and interactions with others (Taylor, 2008). This more holistic view of reflection within context could, at the very least, improve our understanding of how to facilitate critical reflection (Hanson, 2013) and provide new insights into the processes of transformational learning within WIE.

Activity theory (Engeström, 1987) provides a framework in which the systemic nature of the WIE experience could be examined ensuring that the dimensions of time, context and transformational processes are represented. Giving consideration to these dimensions allows for an understanding of transformative learning as a dynamic, continual process rather than a singular event and that acknowledges that the learner is

not learning in isolation but as a part of a greater whole. This theoretical framework acknowledges the interplay between learner, educator, and place potentially revealing the critical pedagogical factors for effective learning that meet the goals of WIE.

The general intention of this research is to conduct an exploration of transformative learning in the workplace setting of the WIE system that acknowledges the multidimensional nature of the conditions of WIE programs and the complexity of the educational practice of the workplace in supporting effective work-integrated education. In particular, the research intends to reveal conditions and processes in the WIE system that enable transformative learning. This research will be guided by the following three key premises: that both educational institutions and workplaces are complex, dynamic activity systems embedded in a socio-cultural context (Engeström, 1987); that academic institutions are intentional in facilitating the students' shift to workplaces through their work-integrated programs (Branton et al., 1990); and that workplaces can be learning environments and, as such, there are conditions and processes that intentionally facilitate workplace learning (Eraut, 2002; Guile & Young, 2003). Based on these assumptions, the researcher will seek evidence of transformational learning that has occurred during work-integrated education experiences and explore the enabling conditions from the perspective of the learner, the educational program, and the workplace that made transformative learning to occur and the potential for the results of transformative learning to be integrated, by the student, back into academic part of the WIE system.



## Chapter 1. Literature Review

WIE is a complex system of educational processes that is designed to facilitate learning and includes both traditional and experiential processes of learning. To position this current research, which intentionally seeks to view the WIE system through a theoretical lens that is not represented in the WIE literature, this literature review is organized to systematically address the various conceptual areas that have led to the development of the research questions guiding this study.

### Learning Theory

Understanding work-integrated education (WIE) begins with understanding learning.

Learning is an enduring change in behaviour, or the capacity to behave in a given fashion, which results from practice or other forms of experience. (Schunk, 2004, p. 2)

This definition identifies both an internal and an external component to learning. Internally, the learner's cognitive structures, or mental models, change as a result of exposure to an external stimulus (Moon, 2004). Underlying these mental models are frames of reference which are comprised of assumptions and the resulting points of view (Mezirow, 2000). Learning, then, occurs in response to variations in the external experience, as well as through changes in frame of reference that enable the learner to take alternative perspectives. It is in the process of assimilating new material that these frames of reference accommodate and adapt, and thus the student learns (Moon, 2004).

This research focuses on learning that occurs within an educational setting, during a work placement, while appreciating that learning can occur throughout all aspects of an individual's life.

Miller and Sellar (1985) suggested that learning is rooted in one of three orientations: transmissional, transactional or transformational. The transmissional orientation is one where the educator is viewed as the source of knowledge that is transmitted to the student, usually in a highly structured format, and assumes that the student is a passive learner. In the transactional orientation, learning is seen as an interactive, dialogic process between instructor and student. There is an emphasis in this process on problem-solving and the development of cognitive skills. The transformational orientation takes a more holistic view of the learner and the interrelatedness of the learner with their context and the focus is on personal and social change. With this orientation the curriculum is concerned with the development of personal and social skills, social change and environmental harmony (Miller & Sellar, 1985).

### **Experiential Learning Theory**

Experiential learning, based on the philosophy of John Dewey, evolved as a way to develop problem-solving and cognitive skills through applying theory in relevant experiential settings (Dewey, 1938). While all learning, and life for that matter, is experiential, Boud, Cohen, and Walker (2000) developed the following five propositions about experiential learning: experience is the foundation of, and stimulus for all learning; learners actively construct their own experience; learning is a holistic process; learning is socially and culturally constructed; learning is influenced by the socio-emotional context

in which it occurs (Boud & Walker, 2000). They also acknowledge the caution made by Dewey himself that some experiences are mis-educative which have the effect of arresting or distorting the growth of further experience (Dewey, 1938).

Experiential learning is not usually “taught,” as the material of learning is the direct experience that includes an active phase of action, doing, or experimentation. Reflection is a necessary component, as is some mechanism for providing feedback to the learner. Additionally, there is a formal intention to learn and that this form of learning appears to be more meaningful and/or empowering to learners (Moon, 2004).

### **Theoretical perspectives on experiential learning.**

Within experiential learning theory, there are a broad range of perspectives that reflect the transactional roots of this model of learning as well as the transformational orientation identified by Miller and Seller (1985). Fenwick (2000) suggested five theoretical perspectives of experiential learning that capture this range. These perspectives (Table 1) are represented in a two-factor model.

Table 1. *Theoretical Perspectives on Experiential Learning*

	Conscious	
Individual		Social
QUADRANT 1 Constructivist	QUADRANT 2 Critical Cultural	
QUADRANT 3 Psychoanalytical	QUADRANT 4 Situative Enactivist	
	Unconscious	

The first factor is the nature of the learning, described within four quadrants delineated on two axes. The x-axis elaborates a continuum from learning that is focused on the individual, divorced from context, to learning that is embedded within and mediated by a socio-cultural context. The y-axis represents learning that lies on a continuum of being primarily conscious and rational to learning that includes the conscious and unconscious. In quadrant 1, representing the quadrant where the learning is considered to be individual-centred and cognitive, is the constructivist perspective (Fenwick, 2000). Kolb's experiential learning theory (1984) falls within the constructivist perspective, where meaning making occurs as a result of a cycle of experience, reflection, conceptualization and experimentation. The constructivist perspective views learning as an individual, primarily cognitive event, facilitated through reflective practice (Schön, 1987). This reflection allows the learner to understand, or construct, their experience and hence derive meaning. Learners are considered motivated to and capable of reflection, perhaps as assisted by the educator-provided scaffolding (Vygotsky, 1986), and this reflection is viewed as a way to integrate the learner with the context. As the learner moves from one context to another she develops mental structures that allow her to come to conclusions about one experience and develop generalizations that could pertain to other experiences. This learning is an individualistic process of progressive development. The mind is considered rational and conscious and as such cognitive and meta-cognitive functions are the primary drivers for learning-through-reflection. As learning is determined to be happening in the mind, the role of the body, intuition and emotions are not considered (van Woerkom, 2010).

The Kolb cycle has been criticized as being too simplistic (Jarvis, 1987; Moon, 2001a; Rowland, 2000) or formulaic (Marsick & Watkins, 1990) and that it does not consider transfer of learning (Wallace, 1996), does not take into account tacit knowledge (Eraut, 2000), and, finally, is too small scale (Newman, 1999). Boud and Walker (2000) offered augmentations to the Kolb model that acknowledge the role of prior experience, and incorporate the internal processors of learning (e.g., intent). The important role of emotions in learning from experience is another enhancement to Kolb's theory (Boud & Walker, 2000).

Quadrant 2 represents learning that is a conscious, cognitive process, but is embedded in a social setting which Fenwick (2000) called critical cultural. The focus of this quadrant, where context is key, is that the learners become critically aware of their own context and the inherent contradictions therein. Learners consider the implications of knowledge, of what knowledge matters, to whom and why. The experience involves questioning the power dynamics at play and can often be emancipatory for the learner. Within the critical cultural perspective, knowledge is seen as a social construction rooted in power relations.

Learning also happens through a critical examination of historical-cultural dynamics and ideologies of particular communities, and occurs as a function of the power relations that govern the social, communication and cultural practices of a system. When these mechanisms of cultural power are identified, the means to resist them appear and allow for new ways of being. As a result, learning can be liberating and can lead to resistance of oppression of self and others. The role of the educator is to help the learner

see the power politic dynamic, the means to resist that dynamic and identify new ways of being in the world (Hederman, 1982).

As this quadrant is based on a critical cultural perspective, critical educators support theories that are dialectical—the individual both creates and is created by society (McLaren, 2009). The purpose of dialectical educational theory is to examine underlying political, social and economic foundations in society that support class, gender and race interests in attempting to understand issues (McLaren, 2009).

Habermas (1972) identified three primary types of knowledge: technical—that can be measured and quantified, practical—that can describe and analyze events, and emancipatory—that can understand social relationship leading to power and privilege (Habermas, 1972; McLaren, 2009). Within quadrant 2 of the Fenwick model the experiential educator is more interested in the emancipatory form of knowledge. Furthermore, the educator with this perspective is aware that there may be unintended outcomes of education, which are promoted as a function of teaching and learning styles, the physical and instructional environment, governance structures and grading procedures (McLaren, 2009). The process used to support learning in this type of learning environment is that of dialogue as different from lecture and discussion because it requires a recognition of the role of the student’s life experience in which the “student becomes an active participant in the educational process through questions, dialogue and the introduction of life-experience” (Westerman, 2009, p. 548). The focus of learning is about the raising of the consciousness of the student and is democratic, inclusive and empowering.

Quadrant 3 of Fenwick's model explicates experiential learning that is individual-centred but that acknowledges unconscious processes; this is labelled a psychoanalytical perspective (Fenwick, 2000). Within this perspective, experience is considered an opportunity that allows individuals to come up against their conscious, impartial knowledge and ability to know, and their unconscious desires and resistances. Where the conscious and unconscious intersect, there is the creation of psychic events that lead to knowing. The learner is autonomous from context, as this learning is a mental process happening internally and regardless of context. The mind consists of the conscious and the unconscious. The conscious is anxious and uncertain and as such represses knowledge (Fenwick, 2000). The unconscious is comprised of desires and resistances that try to break through and impose upon the conscious. Learning from the psychoanalytical perspective can involve fear and even hatred of the experience as a result of being put into a situation of uncertainty (Britzman, 2007). Learning can be seen as the emotional acceptance of one's ignorance (Britzman, 2007) and tolerance of doubt and the unknown. The learner is confronted with a host of unknowns and frustrations, and the learning comes from managing that ambiguity and becoming responsible for their emotional responses (Britzman, 2007). An additional objective to personal development in quadrant 3, is the development of self-efficacy or the belief that one's efforts are likely to result in success and if one doesn't succeed, to recover and learn from that failure more readily (Bandura, 1977). Tapping into the emotionality that occurs from the psychoanalytical perspective could allow for deeper learning and transformation that leads the learner to act true to their feelings and based on their own intentions and values and to become decision makers who are able to think for themselves (Mezirow, 2000).

Finally, Fenwick's quadrant 4 encompasses two perspectives that both share the features of recognizing the unconscious as part of the learning and the influence of the social setting on learning. These are the situative and enactivist perspectives (Fenwick, 2000). Within the situative perspective, individuals learn *in* the experience, not *from* the experience. Reflecting the community of practice in which the learner is situated (Lave & Wenger, 1991), learning happens within the context and therefore cannot be transferred to other settings. Learning happens in a domain beyond the consciousness as it occurs through the doing of something and as such is embodied. The learner becomes a member of a community and participates in interactions with community moving from periphery to the centre of the community (Lave & Wenger, 1991). The role of the educator is in helping the learner acquire "legitimate peripheral participation" with the community of practice (Lave & Wenger, 1991, p. 29).

The enactivist perspective allows for the interaction of context and learner and understanding is embedded in conduct, and the context and learner are inseparable and influence one another as a complex system (Fenwick, 2000). Within this enactivist perspective is the importance of the concept of the development of tacit knowledge, that unconscious knowledge that is created through enacting as we move through the world (Polyani, 1962). The mind or conscious is only part of the learning process, which is also influenced by sensory and motor responses and the unconscious. The individual is part of a larger system, an eco-system where the learner and context are inseparable, and one influences the other. Learners adapt and learn as they participate in their environment. The environment is also a learner, and adapts to the participation, as there is a continuous process of invention and exploration produced through relations among consciousness,



identity, action and interaction, objects, and structural dynamics of complex systems (Fenwick, 2000). Learning can only be understood as co-emergence in which the learner and environment become simultaneously enacted and, as such, there is the possibility of emotional-volitional and ethico-moral enactment (Roth, 2007). The educator's role is in helping the learner understand their role in the system, what expanded space and possibility have been created, what is the tacit knowledge that has been generated? The educator helps the learner tell a story of the mutual change (Fenwick, 2000).

Each quadrant in Fenwick's model has a dominant approach and a philosophical place in which experiential learning is situated. The experience, the context, the learner, and the educator each plays a role specific to each quadrant and, when we consider experiential education programs, this has implications for pedagogy. These implications could, for example, influence how and what experiences are chosen, what learning goals and outcomes are desired from the experience, how the educator supports the student, and how assessment is conducted.

### **Experiential Education**

Experiential education programs are those based on the principles and perspectives of experiential learning. Andresen, Boud, and Cohen (2000) referred to experiential education as experienced-based learning and suggested it includes the following elements that could be considered pedagogical: active use of all the learners' relevant life and learning experiences; continued reflection upon earlier experiences in order to add to and transform them into deeper understandings; intentionality of design; facilitation; and assessment of learning outcomes (Andresen, Boud, & Cohen, 2000).

Experiential educational programs are intentional in their design and based on the assumption that the design of the experience, which includes the opportunities for intense engagement and reflection, will accelerate or improve the quality of the learning.

Experiential education involves the whole person: intellect, feelings, senses, recognition and the active use of the learners' relevant life and learning experiences. The difference between experiential education and experiential learning are that the former is imbedded in an educational program with educational practices that support the experience before, during and after each learning event while the latter may occur without any educational program, or pedagogical processes. For example, students who backpack in Asia during their vacation certainly engage in experiential learning, but not an experiential education program such as a study abroad semester. For a study abroad, generally, there is preparation prior to students' departure, programming at their destination, learning assessments, reflective practices and intentional linkages to their academic programs. These pedagogical processes do not occur for the backpacker. Furthermore, there is intentionality of the design of the experiences such that they link to learning goals and are designed to be educative, not mis-educative (Dewey, 1938). There is instruction and scaffolding provided to best prepare the student to apply theory to practice, whereby the instructor supports the students' learning so that they are better able to close the gap between what they know and what they seek to learn (Vygotsky, 1986). Ultimately, learning outcomes based on the learning goals are formally assessed (Andresen et al., 2000). Reflection upon experiences is required and finally, the learning gained through the experience is integrated back into the educational program to allow for a continuity of

learning (Andresen et al., 2000). This integration could occur as future curriculum development and curriculum instruction.

A key component to any form of experiential education is reflective practice that is the intention to learn as a result of reflection (Moon, 2004; Schön, 1983, 1987). This demanding cognitive activity includes thinking about past actions and on those actions occurring in the moment. By observing and reflecting on past actions, or reflection-*on*-action, it is possible, with effort and time, to make explicit the tacit (or unconscious) knowledge that is implicit in those actions (Polyani, 1962; Schön, 1987). Reflection on past actions is only part of how reflection can lead to learning. Reflection-*in*-action, or the reflection that happens while we are engaged in an action, allows for the questioning of the underlying assumptions and leads to changes in mental models, or learning, and might indirectly shape future action (Schön, 1987).

Revealing this knowledge to themselves allows learners to act intentionally on that knowledge in the future. Intentional and effortful reflection, both in and after experiences, leads to changes in mental models, or deep learning, and influences future actions (Schön, 1987). It is in preparing for future actions that learners can employ reflection-*for*-action, strategizing how to best proceed based on learning gained from reflection on the past (Schön, 1987).

### **Transformative Learning**

Learning is not all of the same quality. As not only Marton and Saljo (1984) explained, learning can occur on a continuum from surface to deep learning. With surface learning, the learner retains only as much information as necessary for the task at hand. Moon (2004) described deep learning as resulting from an intention to seek meaning and

understanding of the underlying ideas and principles associated with the task or experience and, as such, results in a richer knowledge outcome. Deep learning enables not only the recall, but also more importantly, the meaningful use of the knowledge or procedure in a more effective manner (Marton & Saljo, 1984; Prosser & Miller, 1989). Deep learning generates positive emotional responses that reinforce the motivation to engage in further deep learning activities (Moon, 2004). In this sense, deep learning is transformational, as it results in the revision or modification of meaning structures (Taylor, 1997) that are the bases of judgments. Transformative learning results not only in a functional understanding of the constructed nature of knowledge but also a metacognitive stance, with regard to that knowledge and/or an understanding of why that knowledge is important (Moon, 2004).

Transformative learning theory (Mezirow, 2002) identifies the role of becoming aware of one's own assumptions and expectations as crucial for meaning making. Through transformative learning, the learner takes control of their own values and assumptions and puts them to use, becoming active and aware individuals with the ability to empower themselves and others (Holman et al., 1997). Dirkx (2012) asserted that transformative learning is more than deep learning and results in the self-formation of the learner that involves a critique of self, nurturing a sense of self and empowerment to be oneself in the world (Dirkx, 2012).

Transformative learning does not happen without critical reflection which requires the learner to consider multiple perspectives that are influenced by multiple socio-cultural events. For Mezirow (2000), critical reflection is the catalyst that results in a transformation of frames of reference, an "aha" moment or in Mezirow's words a

“mindful transformative learning experience” (pp. 23-24). There would be little disagreement with the assertion that transformative learning is the most desirable outcome of an educational experience. The learning changes how the learner sees herself, the world and her role. The learning is profound and presents possibilities for agency and change in the learner and her circumstances.

To summarize, experiences leading to learning can be divided into three orientations: transmissional, transactional and transformational. Experiential learning can occur without the student being embedded within an educational program. It becomes experiential education when this learning is supported by educational practices that support the experience before, during and after each learning event. With a transmissional orientation, the goals of experiential education are to enhance understanding of the material being transmitted. Experiential education programs can be transactional, where the learning goals focus on problem-solving and cognitive skill development. Experiential education programs can also be transformational when the learning processes and goals focus on social and personal development and social change. The key difference between transactional and transformational is in the role that critical reflection plays in the program. Programs that require the learner to become critically reflective and appreciate multiple perspectives within a complex socio-cultural context are programs that have the potential for those mindful, transformative learning experiences, those “aha” moments that are powerful learning events (Hanson, 2013). Critical reflection does not happen by chance, but is a result of the intentional processes and goals of the educative program that are influenced by the theoretical perspective that underpins the experiential education program.

## **Work-Integrated Education**

In the field of experiential education is the sub-category of work-integrated education. Work-integrated education (WIE) is a term used to describe experiential education that connects a program of study to the workplace (Cooper, Orrell, & Bowden, 2010; Sattler et al., 2011). This form of experiential education has a constructivist perspective, where the learner constructs meaning from interactions with the learning environment. The workplace is identified as a learning environment that enables the learner to deepen their understanding of theoretical concepts, and develop personal and career goals related to their academic programs. Work-integrated education is an experiential education program where a portion of the learning time occurs in the workplace. In Canada, according to Sattler et al., (2011) there are a variety of WIE program descriptions in use including: workplace learning, work-related learning, work-based learning, vocational learning, co-operative education, clinical education, practicum, fieldwork, internship, work experience, and more. As a result of this variation, the Higher Education Quality Council of Ontario developed a typology based on the following categories:

1. Systematic Training: The workplace is the central place of learning, for example apprenticeships.
2. Structured Work Experience: Familiarization with the world of work is an objective within a postsecondary education program. This category includes field experience (labs, clinics etc.), mandatory professional practice (practica), co-operative education and internships.

3. Institutional Partnerships: Postsecondary institution activities or programs to achieve industry/community goals. This category includes applied research projects and service learning.

In each of these types of WIE experiences the institution has a role to play in identifying, mediating, and assessing the experiences, as does the host organization in which the student is placed (Sattler et al., 2011).

This research will focus on an operationalized form of WIE program called cooperative education (co-op). This educational model embeds periods of workplace learning between periods of academic learning with the transitions between learning settings negotiated and guided by cooperative education personnel in collaboration with workplace supervisors.

WIE requires the workplace, as well as the educational institution, to be a place of learning. As such the learner has the opportunity to participate in communities of practice and to benefit from the experiences that this affords (Lave & Wenger, 1991). The workplace in the WIE context is regarded as a site of learning, equivalent to the educational institution setting, and as such may have “curricula and assessment procedures like any other educational program” (Eames & Bell, 2005, p. 157). As the educational institution has little control over the workplace “curriculum and assessment procedures,” there are variations in the quality of the educational characteristics of the workplace and the degree to which they are enacted. Similar to the formal educator, work supervisors may provide support, or scaffolding for learning in the workplace, engaging with the WIE program as workplace educators. Again, the quality and degree of educational supervision will vary. Dependent on these factors, there may be workplace-

based educational environments that support WIE and enable learning but there may also be workplaces that are not willing and/or able to fulfill the educational roles, but rather see WIE programs as a training rather than educational strategy (Van Gyn et al., 1997a).

### **Pedagogical Practices of Co-operative Education as a Form of WIE**

As in any experiential education program, WIE programs, such as co-op, have the pedagogical practices of curriculum design, instruction, scaffolding, assessment, reflection and integration. In the example of co-op as practiced in Canada, according to the accreditation guidelines of the Canadian Association for Co-operative Education (CAFCE), the curriculum design alternates periods in the classroom with periods in the workplace. The work period is full-time and in Canada comprises a minimum of 30% of the total time for the academic program (for example in a four-year degree at least one year of work is required) (Canadian Association for Co-operative Education, 2006).

Co-op programs also deliver content and instruction to prepare students for their co-op terms and to help them appreciate and connect what they have been studying with the world of work. During each work experience, students receive support from faculty and staff with such practices as work term contact and work site visits as ways to assess learning and to assist students adjust to the workplace environment, which tends to be very different from the academic environment (Coll & Eames, 2007). There is assessment of learning and reflection is required, usually in the form of a work term report, journal or other reflection-on-action devices (Schön, 1987). Integration of the learning is attempted through practices, such as post-work term debriefing sessions and poster sessions that are held within program areas. These practices are intended to encourage students to reflect on their learning goals, the attainment of these goals, factors that contributed or hindered



their learning and implications for their ongoing academic program, personal and career goals.

As mentioned earlier, what distinguishes work-integrated education from other forms of experiential education is that the workplace is an additional intended site of learning and as such can be considered an educational environment with pedagogical-like structures.

### **Considering the workplace as an educational environment.**

While there is typically not as formal or specific a curriculum for a co-op term as might be found in a classroom setting, the workplace can be considered as legitimate a context for providing students with an understanding of what it means to practice in a field. As such the workplace can be an important site for learning (Eames, 2003; Eraut, 2002). Orientation and training is often provided, projects and tasks are set with goals, milestone objectives, and outcomes, as well as the student's personal learning goals. Resources such as office space, technology, funds and equipment are provided. Supervisors and co-workers are available to provide support and scaffolding during the term to ensure project success and to allow students to participate within an authentic setting (Billett, 1994). Project milestones and outcomes are assessed, and supervisors assess the student's learning goal attainment. Workplaces often offer opportunities for reflection, usually in the form of a final report that relates to the work term project. Finally, some workplaces allow for integration through presentations provided by co-op students at the completion of their work term (Canadian Association for Co-operative Education, 2006).

Considering the workplace as an educational environment opens up the possibility for applying Miller and Seller's (1985) orientations to how workplaces can best support the educational objectives of a WIE program. A transactional orientation might have WIE experiences and workplace practices that focus on problem-solving and the development of critical thinking skills (Van Gyn, 1994). A workplace with a transformational orientation might encourage critical discourse and critical reflection that would allow for an examination of underlying beliefs and assumptions and open up the possibility of transformative change (Van Gyn & Grove-White, 2011).

### **Current research in cooperative education.**

Research suggests that co-operative education programs may offer additional benefits as compared to other forms of experiential education that do not, intentionally, connect to workplaces. With respect to employability, Bayard and Greenlee (2009) reported that university students in co-operative education programs had higher earnings, higher employment rates and lower rates of unemployment compared to regular university program graduates (Bayard & Greenlee, 2009). Dressler and Keeling (2004, 2011) identified an array of student benefits derived from co-operative education based on an exhaustive literature review. They identified career benefits including: increased employment opportunities (Howard, 2009), and salary progression and career progress (Dressler & Keeling, 2004, 2011; Ipsos Reid, 2010).

However, it has been posited that the potential for learning from co-op is greater than the gain of career and employability skills (Caley & Hendry, 2000). The educational benefits from co-operative education started to be appreciated over twenty years ago in a seminal study by Van Gyn, Cutt, Loken, and Ricks (1997a) that took a longitudinal view

to assess the learning benefits of co-op. This study established that co-op students gained an academic advantage as well as advantages in the areas of social awareness and responsibility, communications, and scientific literacy. A study examining the long-term effects of co-op in alumni who had graduated from of Antioch College between 1946-1956 concluded that one of the most important ways that co-op helped these students succeed was in how they learned to enter new communities of practice (Linn, 2004). Other research has looked at the additional skills that co-op learners can gain which are not taught in classroom curricula (Little, 1998) such as self-management (Reeders, 2000), self-confidence and willingness to take initiative (Postle, 2000) and the development of interpersonal and intrapersonal skills (Jones, 2008) that contributes to improved academic performance.

A Canadian study conducted by marketing research firm Ipsos Reid in 2010 showed that co-op students derived benefits such as a stronger understanding of their academic program and stronger workplace engagement (Ipsos Reid, 2010). These findings confirmed earlier work in which co-op programs have also been shown to support student engagement and retention through strengthening the learner's understanding of a subject or the relevance of their studies to a range of contexts (Avenoso & Totoro, 1994; Carini, Kuh, & Klein, 2006; Kuh, 2010; Kuh, Kinzie, Schuh, Whitt, & Associates, 2005; Somers, 1986). However, in the case of the graduate co-op student, additional care in the development, supervision and assessment of learning is required to meet the specialized academic requirements of these students to ensure engagement and retention (Rowe, 2011).

Research also suggests that co-op can provide benefits to employers; valuable projects are completed and employers can use this time to assess students suitability as a future employee (Braunstein, Takei, Wang, & Loken, 2011). An Australian study found that internationalized WIE programs were one way to create global citizens and offset global skills shortages (Gamble, Patrick, & Peach, 2010) through exposing students to international workplaces. Working in diverse workplaces could also lead to the development of cultural intelligence (Earley & Ang, 2003) in co-op students, enabling them to be more effective in cross-cultural settings (McRae & Ramji, 2011), including global workplaces (McRae, 2013).

Some attention in the research literature has been paid to the nature of the workplace, and how that influences the WIE experience (Eakins, 2000). In one such study, Nasr, Pennington and Andres (2004) showed that, when students were satisfied with their supervisors, they connected their work experience with enhanced professional responsibility and lifelong learning (Nasr, Pennington, & Andres, 2004). Bartkus (2001) identified links between consistent skills for workplace supervisors and student learning while on the job. Institutions also appear to derive benefits from WIE programs, such as community engagement and the opportunity for curricular reform (Cedercreutz & Cates, 2011; Crump & Johnsson, 2011).

Research conducted thus far has examined WIE programs, and co-op in particular, through the independent lenses of student-related outcomes, employer-related outcomes and institutional outcomes. As Eames (2003) noted, there is a deficit in the theorizing and research about how learning occurs during WIE. Over the past decade, research in learning in WIE has begun to include a socio-cultural view that recognizes that this

learning involves cognitive development within a social context that has its own history, culture and interpersonal interactions (Campbell & Zegwaard, 2011; Coll & Eames, 2007; Groenewald, 2007; Peach & Matthews, 2011; Swiriski & Simpson, 2012; Zegwaard & Hodges, 2003). Yet this research has tended to investigate WIE learning through the uni-dimensional lens of the student, the institution or the faculty advisor and in isolation from the socio-cultural context in which that learning occurs. For example, while a study conducted in Canada considered both the student and practitioner perspectives on learning in co-op, neither the supervisor perspective nor the context were examined (Johnston, Angerilli, & Gajdamaschko, 2004). However, a recent New Zealand study examined the use of a portfolio to assess co-op student learning with the assessment being conducted by the student, the academic and the supervisor in recognition of the complex, socio-cultural context of the work term (Hodges, 2011).

Other than this example, research that simultaneously considers the perspective of the student, supervisor and faculty advisor is lacking, as is the use of a theoretical framework that could enable such research. Additionally, research that includes all dimensions of the socio-cultural context needs to go beyond the learning outcomes of improved academic and workplace performance, employability and institutional partnerships, to explore the possibility of transformative learning in WIE. However, if we seek to educate our students to be critically self-reflective individuals capable of appreciating multiple perspectives and having greater agency (Bandura, 2001), this is a goal that we must pursue (Peach & Matthews, 2011).

In summary, most research to date has been limited by considering WIE through a uni-dimensional lens and not giving due consideration to the potential of transformative

learning. In fact, to study transformational learning, in a valid fashion, research must include socio-cultural considerations and take a broader perspective on the context for transformative learning in WIE.

Taking a socio-cultural approach will help contribute to our understanding of what enables this powerful form of learning that can lead to agency, personal and social change and life-long learning (Billett & Pavlova, 2005; Campbell & Zegwaard, 2011; Kift, Nelson, & Clarke, 2010; Tuomi-Gröhn, Engeström, & Young, 2003).

### **Activity theory as a potential theoretical framework to study WIE.**

The history of activity theory (also known as socio-cultural or cultural-historical activity theory) derives from the work of Vygotsky (Roth & Lee, 2007). Vygotsky developed the concept of mediated action, particularly through the use of language, where the learner is supported in their efforts to learn by the instructor who helps them through a dialogic process within a zone of proximal development (Vygotsky, 1986). Vygotsky's student Leont'ev (1978) concluded that socio-cultural and historical mediators, in addition to language, were important in this dynamic learning process (Leont'ev, 1978; Roth & Lee, 2007). Activity theory and the figure of the activity system (see Figure 2) was conceptualized by Engeström (1987) as a way to explain his ideas on learning as an outcome of the dynamic interplay between these mediators, embedded within a socio-cultural and historical context (Weber, 2003).

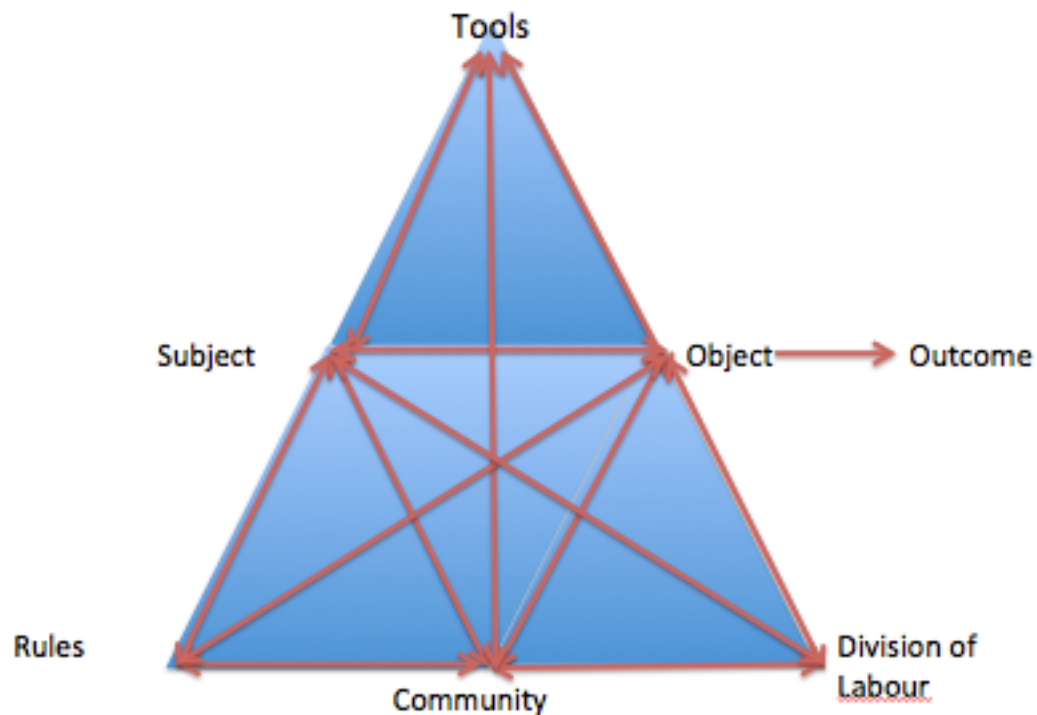


Figure 1. Activity System

The ultimate goal of activity theory is to understand how people transform objects, or why an activity is taking place, into outcomes that are desired as a result of the activity (Keengwe & Jung-Jin, 2013). In explicating this process, activity theory relies on five key principles:

1. The activity in question is object oriented and artefact mediated;
2. There are multiple perspectives;
3. historicity, in that the activity has a historical context and the tools used in the system are artifacts that embody that history (Roth & Lee, 2007);
4. contradiction is a source of change and development; and
5. expansive transformation is based on the resolution of these contradictions (Avis, 2009).

Proponents of activity theory suggest that the learning by the individual and the learning of the system are intertwined (Tuomi-Gröhn & Engeström, 2003) and results in collaborative envisioning and a deliberate efforts towards change (Avis, 2009).

Engeström and others further expanded applications of activity theory into examining interactions between activity systems, referred to as Third Generation Activity theory (Engeström, 2009). This third generation theory has led to the development of a number of concepts, the first of which is knotworking, defined as intense collaboration between partners who would otherwise be loosely connected, but come together to solve problems or design solutions (Yamazumi, 2009). Boundary crossing is another concept and refers to the movement of individuals from one activity system to another. Co-configuration of the subject, object and activity are additional concepts emerging from third generation analysis and can be described as learning that occurs when multiple parties work collaboratively with clients or users to produce a solution or service (Avis, 2009; Engeström, 2009).

In Engeström's work, the scope of learning is radically broadened to include active interpretation, modification and reconstruction of skills and knowledge through a dialectical process. This process is viewed as multi-directional and multi-faceted and involves transitions between and within activity systems creating opportunities for expansive learning (Tuomi-Gröhn et al., 2003). Expansive learning begins when an individual who is part of an activity system questions or resists an existing activity. This results in debate and collaboration among the participants in the system that may lead to the development and implementation of new approaches to the activity in question and a



change in the activity going forward (Tuomi-Gröhn & Engeström, 2003). This is referred to as the Cycle of Expansive Transition (Engeström, 1987) and illustrated in Figure 2.

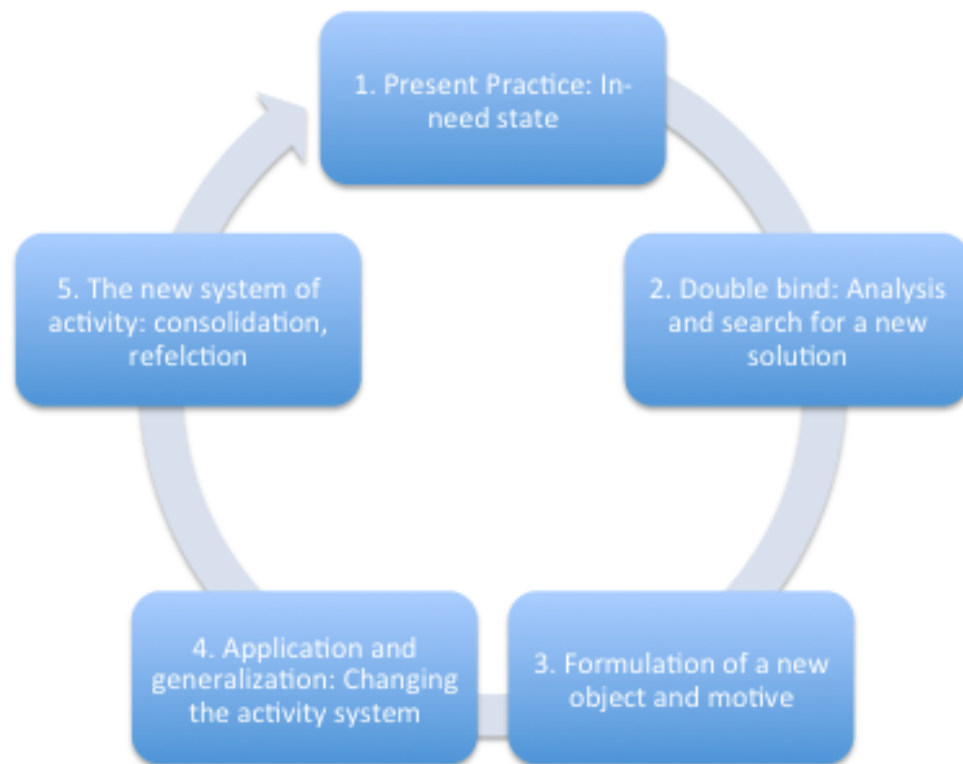


Figure 2. Activity System Cycle of Expansive Transformation

In this cycle there are four areas of contradiction. As explained by Virkkunen and Kuutti (2000), first-order contradictions occur with the first stage, within the elements of the system. Second-order contradictions, between elements of the system occur at the second stage. Third-order contradictions between the old and new ways, when the system is undergoing change, are at the fourth stage. Finally, fourth-order contradictions between

activity systems when the new activity is consolidated moving forward is the fifth stage of the cycle (Virkkunen & Kuutti, 2000). To further explain, the model depicting Engeström's (1987) activity system, that encompasses expansive learning, (Weber, 2003) is shown again in Figure 3:

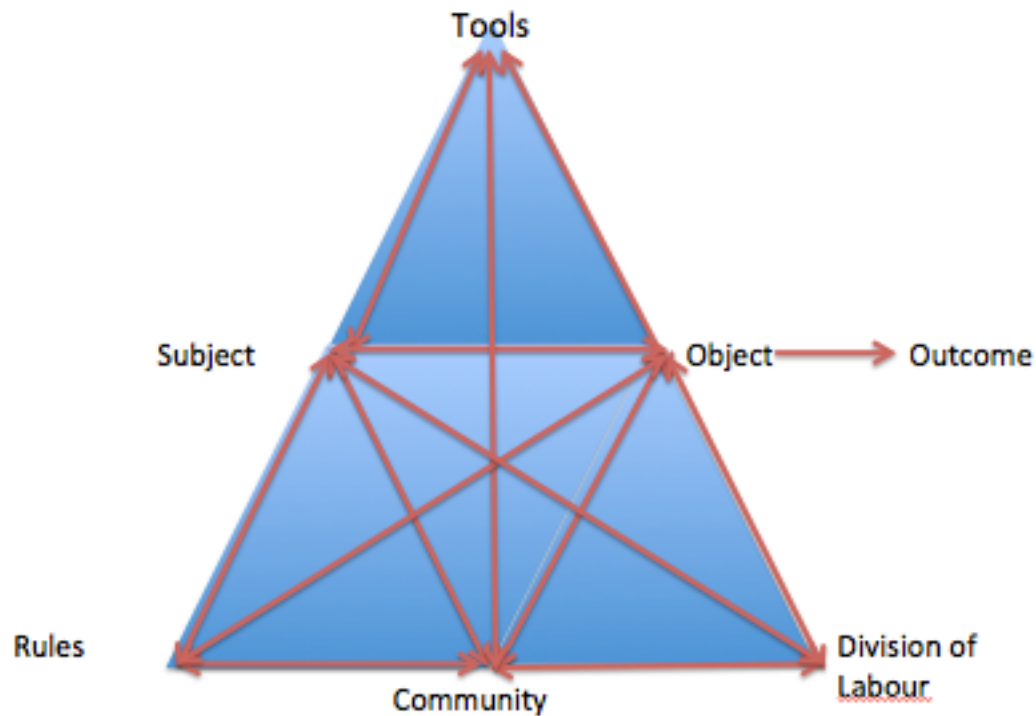


Figure 3. Activity System

In this system are eight considerations. First is the overall activity of interest. This should not be considered a short-term bounded event, but as Roth and Lee (2007) stated, rather an “evolving, complex structure of mediated and collective human agency” (p. 198). The object, or objective of the activity, is why the activity is taking place and what will change as a result of the activity (Marken, 2006). Roth and Lee (2007) pointed out that the object of an activity exists twice: “both in its present state and how people envisage it in the future” (p. 198). The subject represents those who are carrying out the activity. Learning occurs during the “expansion of the subject’s action possibilities” when

pursuing objects during the course of the activity (Roth & Lee, 2007, p. 198). Mediators within the system are: tools, rules, community and division of labour. Tools, the means by which the subject carries out the activity, mediate the subject-object relation and are “artefacts that embody the accumulated history of human ingenuity and creativity” (Roth & Lee, 2007, p. 198). Rules are the cultural norms, standards or regulations that would govern the performance of the activity (Marken, 2006). Division of labour refers to who is responsible for what when carrying out this activity and how the roles are organized (Marken, 2006). The community within and for which the activity is conducted considers the socio-cultural environment in which this activity is carried out. Finally, the outcome refers to the desired outcome from carrying out this activity (Marken, 2006).

Dewey (1938) pointed out that the individual is changed and developed through his external experiences. The challenge for the theory of expansive learning is to re-conceptualize Dewey’s individual as part of an activity system wherein both the individual and the system are changed (Engeström, 2007). In theorizing about expansive learning and activity theory, Engeström did not make explicit how the curriculum, or other pedagogical elements can act as resources in the process. Very little research has focused on the situated knowledge, or the knowledge situated in a workplace, that is required if the subject knowledge, or content, of the curricula is to be acquired (Guile & Young, 2003). In addition, little has been done to explicate the role that emotions play in this process (Blackler, 2009) and the implications of time on the ongoing development of an activity system (Roth, 2010). Further, “research into learning activities and processes of competence development during such work-related learning situations is still in its infancy” (van der Sanden & Teurlings, 2003, p. 123).

In summary, Engeström's activity theory might prove a fruitful way to move forward on the intention of this research study. Activity theory's interest in the dimensions of time, context and transformative processes (Keengwe & Jung-Jin, 2013) will expand our current WIE theoretical models that are based on the Kolb theory of learning. In supporting the use of Activity theory to examine the complex nature of learning in co-operative education, the form of WIE addressed in this research, Eames and Cates (2011) urged us to consider multiple perspectives and that doing so might lead to the strengthening of the theoretical foundations for co-op that in turn would influence pedagogy (Eames & Cates, 2011).

**WIE: The interaction of two activity systems.**

Referring to the activity system triangles shown in Figure 4, WIE is represented as an activity system made up of two systems, or two triangles: that of the WIE program and that of the workplace. In the case of the WIE program, we can consider the points of the system as corresponding to various pedagogical practices in WIE. The subject is the student, the object the WIE project; the tools are the knowledge and competencies available to the student to apply to the project. The rules to be considered are those associated with the WIE program design and requirements. The community is the WIE program faculty and coordinators providing scaffolding. The roles are the division of labour (DoL) found within the WIE program as relevant to the student on a work term. Finally, the outcome is the WIE project achievement and associated learning.

As previously discussed, the workplace is also a learning environment and an activity system that can be conceptualized as a second triangle interacting with the first. The subject is the workplace supervisor, the object is the WIE project, and tools are the

training and resources available to support the project. The rules are relevant workplace rules and requirements. The community is comprised of workplace colleagues and the supervisor providing scaffolding. Roles are the workplace divisions of labour as related to the project. The outcome is the WIE project achievement and associated learning.

WIE as systems within a system requires that we consider the nature of the interactions both within each system and between the WIE program and WIE workplace systems in a holistic manner. The interactions within each system and between these two systems, or activity system triangles are captured in Figure 4 below.

In WIE, students are placed within a workplace and presented with specific projects or problems to accomplish. In so doing, the students often start examining how things are being done and asking why and how. It is through these questions that expansive learning is initiated (Tuomi-Gröhn & Engeström, 2003). As students interact with the mediators in the system questions emerge and resolve. New ideas are implemented, some become adopted and the activity system changes. The potential for mutual learning, where the student and the workplace both learn from this process, exists and as such WIE programs that work in partnerships with workplaces can bring about change through student activity (Tuomi-Gröhn & Engeström, 2003).

## WIE and Workplace Activity Systems

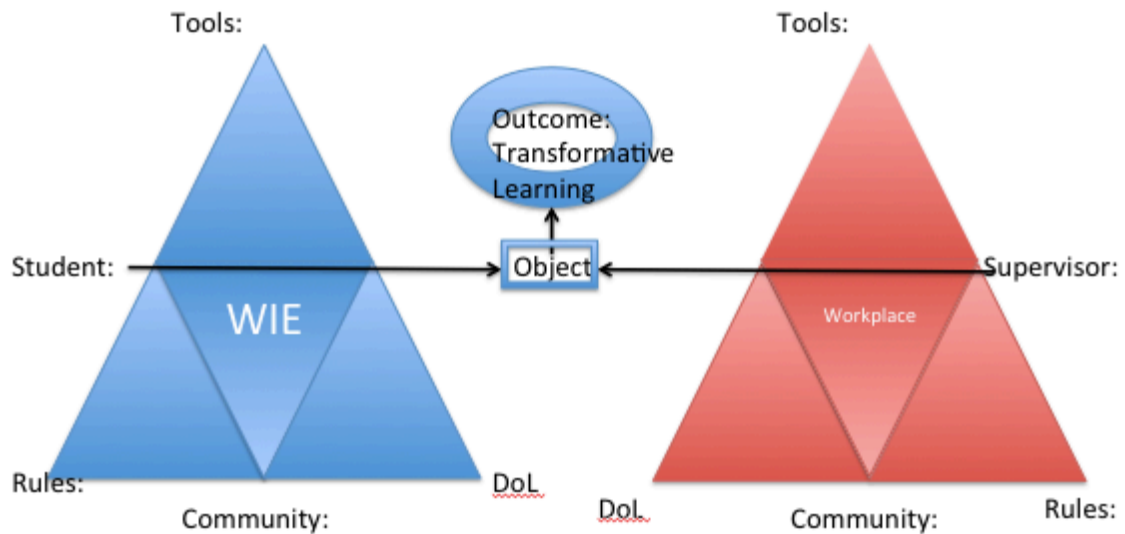


Figure 4. Interaction Between two Activity Systems: WIE Academic and WIE Workplace

The outcome of focus specific to this research is that of transformative learning. Critical reflection is crucial as an antecedent to transformative learning. Without critical reflection there will be no transformation, and transformation sets in motion a chain of events resulting in a shift of assumptions and beliefs that lead to a new way of being, feeling and doing that can be actualized through further reflection. Thus understanding how transformative learning occurs within the activity system of WIE program and workplace will provide insight into how the integration of this learning can lead to change within our WIE programs, students and workplaces. Figure 5 depicts this integration.

## Integration of Outcome Between WIE and Workplace Activity Systems

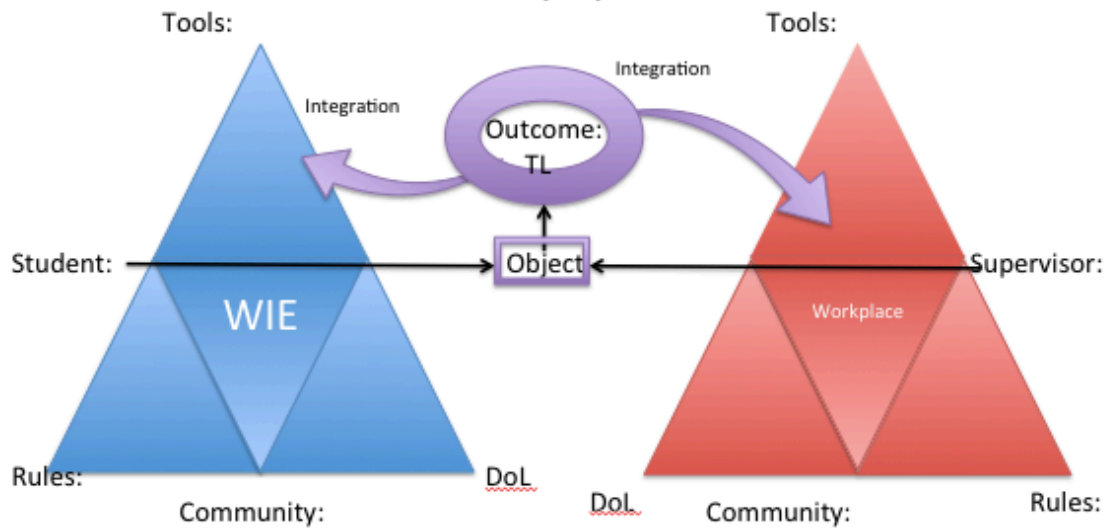


Figure 5. Activity System Components Enabling Transformative Learning and Integration

## **Chapter 2. Research Methodology**

To address the research question of “What pedagogical and workplace practices available during WIE contribute to transformative learning?” this research will explore:

1. The occurrence and experience of transformative learning by the student in the WIE workplace;
2. The WIE academic program and WIE workplace system components implicated in the critical reflection necessary for a transformative learning outcome; and
3. How the WIE program and WIE workplace system components support the integration of a transformative learning outcome back into both WIE and workplace systems. Towards the development of a theoretical model, the research question posed attempts to address this gap in our current understanding.

### **A Qualitative Case Study Using the Kelly Repertory Grid**

As qualitative research allows a perspective that “looks at the whole within the context,” a perspective sometimes missing in quantitative studies (Gibson & Hanes, 2003, p. 183), this was an appropriate methodological approach for the current research question. As discussed previously, the intent of the research is to take a holistic and multi-dimensional view of WIE through the application of a theoretical framework that guides this research (activity theory) and takes into account the various elements that are active in the WIE system. As this study was directed at the exploration of transformative learning from an activity system perspective and has, as its purpose, to advance theory in WIE a qualitative research approach was chosen. As Lindlof stated, “Qualitative inquirers seek to understand their objects of interest” (p. 9) and allows for that



understanding to be deepened and the more subtle features of the object of interest to be revealed (Lindlof, 1995). In such an approach, there is no intention to engage in prediction, but this does not rule out the identification of inferences arising from increased understanding of the object under study.

The choice of a qualitative approach to this research is appropriate as the study is an initial exploration for evidence of transformative learning in WIE, conducted through a novel theoretical lens, with a view to nascent theory building in WIE. Findings from the research may inform theory in WIE but will not necessarily have specific implications for practice beyond the contexts included in this study. Efforts have been made to strengthen the trustworthiness of the study, which includes:

1. Credibility through the choice of data collection and analysis techniques that reduce researcher bias and the involvement of multiple informants within four difference case settings, at two points in time;
2. Transferability through the detailed documentation of the participants, and the context; and
3. Confirmability and dependability of the findings through a clear and detailed audit trail of research processes.

There is a range of qualitative method, however, and the most appropriate to examine the WIE experience for the purposes of this research appears to be the descriptive case study (Yin, 2003), as it allows for the “study of the particular” (Rosenberg & Yates, 2007, p. 447) and is usually used when the topic of interest is complex, highly contextualized and where there are multiple variables that cannot be controlled. In case study research, the researcher collects extensive information over time

about an activity, an event or a program from several individuals using a variety of forms of data collection (Creswell, 2003). The event being researched is bounded by time and place and requires multiple sources of data and a rich understanding of the context. Data may include documentation, archival information, interviews, observations and artefacts, among others. Case studies can be single, collective, multi-sited or within-site and focused on a case or an issue (Creswell, 1998). Challenges with case studies include identifying which case(s) and how many to study, establishing a rationale for the purposive sampling, gathering enough evidence to support claims, and determining the boundaries for the case (Creswell, 1998).

Using a case study approach enabled this researcher to conduct in-depth interviews, within a workplace setting, of the coordinator, student and supervisor and to consider all aspects of transformative learning during the WIE experience.

Another reason for the use of the case study method is that it enabled analysis of data from two particular activity systems (WIE academic program and WIE workplace setting) with the focus on human action and how these actions influence the social order, the coordination and innovations within and among the activity systems (Engeström, 1995). Given that the unit of analysis is the interaction between both the WIE academic program system and the workplace system, using a case study approach allows for in-depth consideration of the interactions within and between these systems as a collective enterprise with a shared object (Ludvigsen, Havnes, & Lahn, 2003).

## **Measures**

As the heart of this research question lies in what pedagogical and workplace practices and conditions available during WIE contribute to transformational learning,

one systematic approach to navigating this complex question is the use of the Repertory Grid (RG) as a way to derive the content of the case study. The RG was developed by George Kelly (1955) as an outcome of his Personal Construct theory (Kelly, 1955). Kelly posited that the way in which people make sense of the world around them was through the development of constructs, personal ideas or theories. It is through these personal constructs that people can anticipate events, and are able to develop, and it is through experience that these constructs are tested, confirmed or revised (Kreber, Caslteden, Erfani, Lim, & Wright, 2003). Kelly's personal construct theory (PCT) built upon the previous work of Dewey (1938) who also identified the importance of experience in making sense of the world, in particular within the context of education (Dewey, 1938). While Kelly's initial use of the RG was as a technique to assist with personal counselling sessions, it is now used in various research domains from market research (Adams-Webber, 1979) to the identification of cultural differences (Tomico, Karpanos, Levy, Mizutani, & Yamanaka, 2009). The reasons for the wide spread application of this narrative analysis tool may be attributed to the flexibility and versatility inherent in the RG as researchers can choose a range of elements to be included and to the relatively high test-retest reliability and validity shown with the technique (Walker, 2007).

Researchers can explore any topic, for example transformative learning, asking interviewees to provide examples of their experiences with the topic. In the case of this research, interviewees will be asked about when they had experienced (the students) or had observed in students (the supervisors and coordinator) transformative learning while on a WIE work term. The elicited examples become the elements in the RG. Once all examples are provided, the interviewees identify the constructs, in question. In the case of

this research the constructs being identified are the enablers of those transformative learning moments. These constructs will be added to the RG.

Once the grid is complete, with all elements and constructs identified, the interviewees rate the significance of each construct against each element on a scale of 1 to 5. For example, if the construct *support of a supervisor* is identified as an enabler of transformative learning then this construct will be applied to each of the elements provided and rated as to its relative strength in each instance. This process will be repeated for each element and set of constructs until the RG is completed.

While the students, employers and coordinator are interviewed, clarification of their responses to ensure their accurate interpretation occurs—a technique called laddering. After both of the elements (student transformative learning experiences) and constructs (mediators) were elicited participants were asked to rate each construct against each element on a scale of 1 to 5. A rating of 1 indicated that the construct was very important to enabling the element, and a rating of 5 indicated that the construct was not a strong enabler of the element. Participants were offered the opportunity to review their constructs to increase the credibility of the results.

In the post-term study, students and employers were asked to identify any new elements and constructs that they would like to add to the RG as a result of the completed term. The new constructs were elicited through inquiring how the new element (where appropriate) was different from the other elements in terms of transformative learning during the work experience and if they had any further thoughts about an additional construct that should be added. In addition, any matching constructs or elements were examined to see whether they were, in fact, distinct. The constructs were again rated on a

five-point scale to allow for any changes that might have arisen over the semester. Again, participants were offered the chance to verify their rating scale. The rating method is an evolution of Kelly's original dichotomous approach and a development that is considered an improvement as it allows participants greater freedom when sorting elements, removes the risk of skewed distributions and does not force choices that are not present (Hunter, 1997; Latta & Swigger, 1992).

In addition to the use of the RG as an analytical tool for the case study approach, a narrative analysis of the conversations generated by participants while completing the RG was also included. Including the narratives recognizes that speakers make tenuous statements and then back these statements up with additional statements that they consider unquestionable. These unquestionable statements are their "discursive resources" and these resources are derived from a set of interpretive repertoires (D. Edwards & Potter, 1992; Gilbert & Mulkey, 1984). It is through examining these repertoires that additional insight can be gained to reveal both explicit and latent themes, helping to validate and elucidate the results derived from the RG. The combination of the RG and narrative analysis helped the researcher to identify what transformative learning (elements) have been experienced, what enabled (constructs) that learning, which enablers were most influential (the ratings), and then, through the narrative analysis, why these have been identified, why they are significant, and how they change over time and interact (the explicit and latent themes).

Through in-depth interviews with students, supervisors and WIE academic personnel that were guided and analyzed with the RG methods (Kelly, 1955) and interpreted through the lens of activity theory (Engeström, 1987), both instances and

enablers of transformative learning in WIE work settings were identified. Depth in the narrative outcomes was improved by considering each case at both the beginning of a work term and the end allowing all participants to re-evaluate their initial responses based on their most recent workplace experience and to reinforce, expand, or modify their perspectives on the concepts explored in this study.

The use of the RG ensured that researcher bias was controlled and allowed for systematic identification of enablers of various experiences of transformative learning. The use of activity theory as a conceptual framework to interpret the RG outcomes allowed for a more rich and systematic interpretation of the data.

### **WIE Context and Participants**

The students, supervisors and coordinator interviewed for this study, are all participants in the University of Victoria's Exercise Science, Physical and Health Education Cooperative Education Program (EPHE). For the purposes of this study, the term WIE will be used and includes cooperative education (or coop) as a particular form of WIE. The following program areas are included in EPHE: Kinesiology (optional WIE), Recreation Health Education (RHED) (mandatory WIE) and Masters in Coaching Studies (mandatory WIE). Approximately 120 students participate in the EPHE WIE academic program and are placed on work terms in BC, across Canada, and internationally. Students typically work for four months, full-time, and are paid. Prior to participating in the WIE academic program, the students are admitted and required to attend a series of workshops where they learn about job finding, career planning and

competency development, relevant to their field of study. Each student competes for a placement and is hired based on a successful interview with the employer.

At the beginning of each work term students complete learning objectives, based on the context of the workplace and derived from a set of core competencies and discipline specific competencies. At the mid-point of the work term, the student completes a mid-term competency assessment in which they self-assess their competency development in light of their learning objectives. Their supervisor also assesses their achievement. This assessment process is repeated at the end of the work term. Students are required to write a work term report summarizing their work term activities, achievements and learning.

Finally, upon return to campus for a classroom term, the students participate in a poster session where they display a summary of their work term report in a poster format for other students and faculty to review.

Given the intense and individualized nature of this research, careful consideration of the participants and power-over was required. Four student participants were chosen to reflect some variety in the WIE workplace contexts while keeping the WIE program area constant. As a result, two of the participants chosen were in small workplaces (fewer than 20 employees) and two in larger workplaces (more than twenty employees). The two large workplaces were public sector and the two smaller workplaces were private and not-for-profit, respectively. These dimensions provided some meaningful differences in the workplaces for a WIE. Private, not-for-profit and public sector workplaces tend to have different goals and metrics resulting in different rewards, leadership styles and cultures. Small and larger workplaces tend to have different resource levels,

organizational structures and time horizons. Choosing participants based on these dimensions, but keeping the program area constant, allowed for some variety and provides a more complete picture of WIE workplaces, when all four cases are taken into account.

As the researcher is the executive director (ED) of the WIE program being studied, student, coordinator and employer participants were fully informed and assured that their responses would be kept in confidence. The ED does not have any involvement in assessing the WIE term, which diminished the power-over concern, but did not eliminate it entirely due to possible perceptions of power-over. The ED has no power-over the employer. The ED does have power-over the coordinator, but in the context of this research, the question being explored did not relate to job performance or evaluation. The coordinator that was interviewed was senior and experienced, with job security, having successfully passed her probationary period many years previous. To safeguard the coordinator, and ensure no abuse of power over any participant, the researcher provided results from the interviews to all participants for their validation and approval for inclusion.

Undergraduate students about to embark on their senior work terms and having completed at least two previous work terms, were invited to participate in this study, and four were chosen. Of the four students, three were in the Recreation Health Education Program (B.A.) and one was in the Kinesiology program (B. Sc.). Recreation Health Education students tend to work in community settings that provide health and wellness programs. Kinesiology students tend to work in clinical settings that provide therapy or



recovery programs. This was consistent with the work terms in which these student participants were situated.

The coordinator is an experienced educator and familiar with the students, their workplaces and the program. In the WIE education program at the university, coordinators, typically, have at least a master's degree in the discipline and have experience in the workplace-related to the discipline. This background and experience provides the coordinator with an understanding of the curriculum, the required competencies for success in the field and workplace contexts. This understanding is put to use in facilitating the learning experience of the students before, during and after each work term and in the choice of appropriate work term settings.

The chosen WIE employers were those who had hired the students from this particular academic program for the summer term. Employers had agreed, prior to being involved in this research, to providing at least 12 weeks, paid, full-time meaningful work. The work was related to the student's area of study, such that they can apply their knowledge in the workplace, develop competencies and be included in a community of practice. Supervisors were willing to participate in the setting of learning objectives and in the assessment of the student, at the mid-point and end of the work term.

### **Data Gathering and Timeline**

To produce in-depth case studies of four WIE experiences over the course of one four-month semester in the summer of 2013, the following data was gathered:

1. Demographic data from students, employers and the co-op coordinator that included program, number of completed work terms, workplace sector, hiring history, experience of coordinator;

2. Workplace descriptions from employment postings and information from both students and employers; and
3. Narrative data from in-depth interviews of students, employers and coordinator at time I (T1) that occurred early in the work term, and at Time 2 (T2), which occurred just before the completion of the work term. The structure of the interviews was the same due to the application of the RG protocol.

### **Data Analysis**

The data collected from each participant in the study was analyzed at T1 and T2. The first data analysis activity was to complete the RG to identify transformative learning experiences (elements) and enablers (constructs). Construct robustness was reinforced by the identification of interview excerpts. Using the RG, the construct ratings generated means and standard deviations that revealed their strength and consistency in application of the construct. A narrative analysis on the full transcripts was completed at T1 and T2 to identify any latent themes and to provide additional explanation about the explicit elements and constructs elicited through the RG process. The elements were then categorized according to Fenwick's perspectives on experiential learning (Fenwick, 2000).

### **Data Interpretation**

Activity theory provided the theoretical framework through which to interpret that data. As such, the constructs (enablers) were mapped onto the WIE program and workplace activity systems as mediators of the transformative learning outcome. The internal dynamism of each of the WIE program and the workplace activity systems was examined. The constructs were mapped onto both systems based on strength and

consistency and, then again, according to perspective. Connectivity between the two systems was identified. In T2 this process was repeated with any additional elements, constructs and ratings analyzed and reported. In T2, examination of any matching elements and constructs was undertaken to see if they should remain distinct. Additionally in T2, analysis of evidence of integration of the transformative learning elements back into both the WIE academic program and the workplace systems was illustrated.

A comparison of the four student and four employer responses, and coordinator perspective was done to examine commonality and divergence of responses amongst the participants. Excerpts from the student and employer transcripts were used to further ascribe meaning to the results through a narrative analysis. All of this material was collected, transcribed and analysed in order to draw out emerging themes and the relationship between the elicited constructs and the activity theory triangles.

In summary, the case study contained results from the Kelly Repertory Grid interviews held at the beginning and at the end of the work term with four students, their supervisors and co-op coordinator. The results were the elements and constructs identified by the participants and were illuminated with the narrative that accompanied the interviews. Using activity theory provided a solid framework upon which to interpret the findings in answering the research question.

### **Research Limitations**

The main limitation to any qualitative study rests on the quality of the insights of the researcher. This quality of insights, referred to as trustworthiness, is comprised of credibility, transferability, dependability and confirmability (Lincoln & Guba, 1985). As

such, a number of steps were taken to increase the credibility of the research methods and included verification of all interview transcripts by the participants and verification of the researcher's work emanating from the RG analysis. As well, implementation of interviews at two time periods increased the credibility of the research process.

Transferability was ensured through providing sufficient detail about the research process such that the study can be replicated in other contexts. An audit trail of the process and of the research products ensured both dependability and confirmability. As a result, the trustworthiness of this qualitative study was established.

The use of the RG as the narrative data analysis tool to extract the explicit themes on transformative learning, and the factors that enable such learning, is limited by the assumptions of the RG. The fundamental assumption of the RG is that participants can actively engage in making sense of, and expanding on, their experiences. A second important assumption, and one that is often criticized, is that the constructs that participants identify are always dichotomous in nature.

The narrative analyses were conducted only for the purpose of deriving latent or implicit themes, supplementing the derivation of explicit themes on transformative learning from the RG. The researcher, although engaging in the narrative analysis task in a thorough manner, was the only reader of these narratives. Because of this, the possibility of researcher bias was increased and the depth of the narrative analysis may have been compromised.

Another limitation of the study pertains to the specificity of the findings as a result of the domain from which the data were collected. Participants were purposefully chosen and represent a single WIE program and it was their experiences with

transformative learning that was the particular object of interest in this study. As such, the findings are particular to the context of WIE in recreation and health related workplaces.

### **Chapter 3. Case Descriptions, Analyses, Interpretations and Discussions**

Each of the four cases in this chapter are presented fully with respect to a description on the context, data analysis of both student and supervisor, data interpretation and discussion. The intention in presenting each case in its entirety is so that each case stands alone to provide a thorough picture of that particular context, with no cross-referencing to other cases provided at this point. As the coordinator is the same for each of the four cases, the coordinator's data analysis, interpretation and discussion is then provided following all case presentations. The coordinator perspective is only provided once but should be considered equally applicable to all four cases. Subsequent chapters provide a comprehensive discussion of the combined findings with cross-referencing among the four cases. The final two chapters include all three perspectives and offer a summative discussion and implications for theory, practice and research.

#### **Case A. Large Public Organization**

In case A, as with all the cases, a description of the context of the setting is provided followed by data analysis, interpretation and discussion from the student's perspective. Data analysis, interpretation and discussion from the supervisor's perspective is given and is followed by a summary of findings that combines the student and supervisor's perspective.

#### **Context**

Case A takes place in a large publically funded organization in Victoria, BC. The specific division that has hired the student is responsible for a wide range of recreational

programming for the customers of the organization. In the summer term, one of the large recreational programs is a series of summer camps for children in the community. The camps are primarily staffed by students who are hired to deliver the programs and, in the case of this student, assist in the administration of the camps. The Case A student is at the beginning of a fourth co-op work-term that is the final required work term for her program. She is enrolled in the Recreation and Health Education program in the School of Exercise Science Health and Physical Education (EPHE), at the University of Victoria and is entering her fifth and final year. The student completed a previous co-op work term at a local community recreation facility as a summer camps program leader, working with children and two work terms in this current organization, first as a summer camp supervisor and then in marketing and promotions. Given her previous experience with the organization, she was afforded increased responsibility with this, her final work term. Her role for the term was as the summer camps program assistant where she engaged in the supervision of the team of camp leaders, scheduling staff hours, communicating with participants and their parents and developing programs.

The supervisor of the student has worked at this organization for six years and, in her current role, for two and a half years. As Camps and Community Programmer she supervises up to 50 staff comprised of full and part time camp leaders and coaches of various programs. Many of the staff are students from the local university. Throughout her professional career she has hired five co-op students and, in previous positions, supervised students on internships. While she was not a co-op student she did complete an internship during her undergraduate years and has a strong understanding of the co-op program. In addition, she worked with Case A student previously and is highly

appreciative of the student's capabilities and has a good understanding of the intention of Case A student's program.

The summer camps program is well established in the community and attracts children of all ages and abilities. New staff members receive an orientation to the job and in-service training. The program accesses a range of sport facilities in various locations and, as a result, camp leaders work separately from supervisory and administrative staff. Camp programs run throughout the summer months.

### **Results from Interviews: Case A Student TI**

In order to ensure a common understanding of the topic of this study, i.e., "transformative learning," the interview began with a discussion about what transformative learning meant to the interviewee to establish a common understanding. As a result, Case A student was asked to describe what transformative learning meant to her. Her description identified that for her transformative learning involved doing, reflection and a resultant change in perspective:

I think it means, along the way, and at the end of your work term, or the process, you can pause to realize where you are and how far you have come and how you have changed. . . . It is more so a change in how you carry out a task, how you present yourself, how you engage with other people.

NM: So a transformative learning experience is where you have changed in some way?

Changed your perspective, your way of doing.



This understanding established a benchmark for the interview that transformative learning was learning that resulted in a change of perspective and resultant change in action.

### **Transformative Learning Elements**

The student identified ten examples of transformative learning. The first occurred during her first work term in which she had difficulties with a co-worker and had to work through those difficulties.

From there I realized that yes, it is good to work with people who aren't like you and that totally strengthened me to be a leader the next summer, because I had all these games and this research.

What was transformative for her was the realization that not everyone worked like she did nor did they have the same values or interests in the work. In addition, working with others who did not share her values required that she needed to rely upon herself to conduct research and develop the resources needed for the camp, such as games to be used in programming. This example was labelled: *working with co-workers who are not like you*.

The second transformative learning moment resulted from her changed understanding about the need to communicate on a regular basis with her supervisor in order to get the support she needed.

The thing that I learned, I took on too much and I didn't tell my supervisors about it. They would have their check-ins with me: "How is everything going?" "Oh,

good, good, good.” I kind of lied because I didn’t want to seem incompetent or that I couldn’t do it.

The transformative component of this learning was that quality communication was based on a solid relationship with her supervisor. This example was labelled: *building a relationship with supervisor to ensure good communication.*

The third example arose from a similar situation and resulted in the recognition that many work situations require a team environment and that all members of the team need to be communicating well.

That is another thing I learned, I have very very high standards of myself and of other people. If I feel that I’m giving 100% and they are giving me 50%, I get a little bit resentful of them, but I don’t necessarily express it, because I want them to realize it on their own. Then I realize I’m contradicting myself, because you should express yourself. I guess it was finding the words to be more concise in how you tell people how you feel. I didn’t necessarily tell him, I kind of acted it. “Can you take the lead in this game, can you finish up the work plan?” But I didn’t say it with the seriousness and what it really meant to me.

The transformative learning was that no matter how strong one person is, they need other team members to be on the same page to ensure success. This learning moment was labelled: *having regular communications with co-worker to ensure program success.*

Building on Case A’s understanding of the need for team was learning that, similar to the situation with the supervisor, one needs to build strong relationships with the team to ensure the trust that leads to strong communication.

Just talking about “How are you doing, are you going camping this weekend,” forming those personal relationships as well. Making people feel that they can say hi to you, or talk about whatever. If they had a difficult day, “I just had the craziest day” and feel that they can trust you and that you are not going to tell other people.

This fourth example, to ensure good communication and team building, was labelled: *building personal relationships with co-workers.*

In building these relationships, the student realized the importance of being true to herself, being genuine and caring in a consistent and authentic manner.

I think it is mostly in the way you present yourself, the way that you talk to other people, your body language and making sure that other people know that you are genuine, I guess, that you actually care about what you do and care about them.

This transformative learning was labelled: *The importance of representing yourself in a genuine, consistent, caring fashion, verbally and non-verbally.*

In her interactions with co-workers and others the student came to another important realization about the personalities of co-workers.

I’m very much an extrovert and I like working with extroverts, people who tell me how they feel and who are very upbeat and positive and outgoing.

She identified as being part of the former category and for her the transformative learning was that working with other extroverts was easier for her. This was labelled: *easier and more enjoyable to work with people who are extroverted, or, like me.*

The fifth example also related to responding to others:

That I need to set up my boundaries and schedule myself into my life.

Sometimes I have a hard time saying no. I say yes too much and try and take on too many things because I want to please people. I'm very much a people pleaser. I want people to recognize myself. I want to please myself, but at the same time I want to make them happy.

As someone who is extroverted and very passionate about her work, she described situations where, in her desire to please, she overextended herself. This transformative learning example was labelled: *need to set boundaries and learning to say no.*

During her experience as a summer camp leader, Case A student gave many examples of supporting fellow staff to do their jobs. One example that was transformative for her involved supporting a staff member to reflect and learn from a difficult interaction with an angry parent.

Being able to see somebody else reflect the way that I have reflected that was probably one of the most powerful things. Being that mentor. Being on the other side of that.

This example was labelled: *helping a staff member reflect on their performance and provide support and mentorship.*

Conflict situations presented additional transformative learning opportunities, and resulted in a change in perspective about how conflict is perceived and managed:

To me there is no such thing as a conflict, to me everything is a conversation. It is totally your perspective on a situation. How you say it, the words you choose and

the manner you do it. Understanding the other person, and saying, “How can I adapt and be stronger and move forward.

This transformative learning was labelled: *handling a conflict situation*.

Finally, the student identified a moment when she came to believe in her capabilities and what that meant for her feelings of satisfaction, self-worth and desire to empower others.

I can do this. I will be awesome. I want to do it for myself, because it fulfils me. I want to make other people believe that they can be that way as well. Loving yourself and being able to share it with other people. You can do that. You can lead this game. Take a chance.

This transformative learning was labelled: *developing belief in self and capabilities*.

### **Transformative Learning Constructs**

The following section identifies enabling factors, the constructs of the transformative learning experiences that the student described in the interview. The first of these constructs is having a role model. The student described how this specific role model, a family friend, helped enable her transformative learning by mentoring her to:

Stay calm and keep yourself composed in the midst of chaos.

This construct was labelled: *a family friend who is a role model and mentor*.

The second construct the student spoke about related to having a value system and how this supported her transformative learning. She articulated this as follows:

Know who you are at your core and hold on to that and not let that go. Always do what you think is right. No matter if nobody else sees it, but to do what is right for you.

This construct was labelled: *having a strong sense of right and wrong*.

The student described the third construct, labelled *supportive family* as follows:

No matter what is going on in the workplace, whatever happens, my home is my place where I can gather myself. My sanctuary. I can sit there and vent to them and they just listen without judgement.

The fourth and fifth construct related to the student's view of two of her very different supervisors, first as objects of respect and second as role models. The student articulated her respect for her supervisors using descriptions such as:

He is so modest, he is so wise; he is like the most passionate athlete I have ever met.

She is so passionate about what she does. She never gets beaten down. She is very much a warrior.

This construct was labelled: *respected supervisor*.

The supervisors also provided role modelling to the student that she felt supported her transformative learning. This role modelling, that is very different in each case, was described as follows:

He will never take his work home. He is so balanced. Nothing gets to him. No drama, etc. I totally admire his ability to step away.

For her this is her life. She will be here until 7:00 at night. For her it is very much go, go, go. But she loves it.

This construct was labelled: *role models in supervisor*.

The sixth construct also related to supervision, and in this case the type of feedback received from the supervisor.

She never judges, no matter what you say. She is constantly supporting me and lets me know that she is constantly behind me. Same for X. He totally gets it.

This construct was labelled: *supportive feedback from supervisor*.

Personal autonomy featured strongly as an enabler for this student's transformative learning that she described as "probably one of the biggest things." She explains that this autonomy allows her to try new things, setting the stage for learning regardless of the outcome of the venture.

I like to be able to create and do, lead and manage . . . for me it is the self-expression of myself. If you want to do a program, how do you really include your own personal values into that? Basically knowing that whatever you do it is going to be good, because it hasn't been done before. Even if it flops, it is still not a failure.

This seventh construct was labelled: *autonomy to express self and values*.

The eighth construct labelled: *learning new theories and techniques*, emerged as she discussed the importance of "continuous learning" and learning about new theories and techniques related to marketing:

So many employers will hire people who have that marketing experience, who know how to raise money. So this is strategic on my part as well, to stay here for this marketing experience.

NM: To learn that additional skill set?

Yes. It is so important. In today's world you need to be tech savvy, understand people. If you throw programs out, you need to know what they need, what they want, what are the trends, what is cool, what drives them? It is totally strategic for me.

In addition to the enabler of opportunity to learn was the opportunity to network as an enabler of transformative learning. The student remarked that:

Having a conversation with somebody is so meaningful. What are you doing at your rec centre? What kind of Facebook things do you run? What programs were cool?

This ninth construct was labelled: *opportunity to network*.

The tenth construct of: *opportunity to add value on the workplace* emerged from the following student statement:

For me it is more enjoyable if whatever you kind of do, you get to leave your legacy on it. . . . If you are able to let your personality and your personal passion shine or reflect in the job or reflect in what you do at the workplace, it is going to be more enjoyable to you and you are going to feel more connected to that.



Being able to articulate learning goals and communication styles at the beginning of the work term was identified as another construct that enabled this student's transformative learning. She expressed this in the following way:

If you can tell the employer up front who you are, your values, how you prefer to communicate . . . you are able to be stronger. Just being upfront. These are my personal goals. Tell me what you want as well, how can we find that medium for everything? It totally asks you to be vulnerable.

This construct, the eleventh, was labelled: *opportunity to share learning goals and communication styles at beginning of term.*

In describing the twelfth construct the student spoke about her mid-term assessment that was conducted by her co-op coordinator and supervisor. In that assessment she was asked to explain why she had been holding back on sharing some of her ideas on the workplace, and playing it safe.

They called me on it . . . I was keeping myself small. You can do what you are asked and feel good about it and be recognized for it, but you don't necessarily grow . . . not letting myself shrink small. It is easy to do that. Or you see somebody who is doing it well and you think that you might not be able to do it as well. So you keep yourself back.

As she felt that the push she received during this mid-term assessment enabled her to have transformative learning. This construct was labelled: *assessment by coordinator and supervisor that pushed self past comfort zone.*

Linked to this construct was the additional enabler of actually being asked by a supervisor to do something that was past her comfort zone:

Being asked. . . . My manager asking me if I want to do this? Just being asked the question.

This thirteenth construct was labelled: *being asked to do things past one's comfort zone*.

When asked what else had enabled the student's transformative learning she talked about the important role that an influential professor had played in attracting her to her current studies, demonstrating positive relationship building skills and expressing caring in a way that enabled the student to feel safe and explore her passions about the course.

He creates community. . . . He has no ego . . . there was lots of interactive work. Instead of doing it old school he goes with his own flow and what we want versus putting up a PowerPoint presentation. He knows that people have lives out of school. He really helps you balance that. The interactive work that he does in his classroom makes you more connected and happy to see the people that you also take this class with. . . . He knows that his class isn't the most important thing in your life, and he gets it. But he wants you to enjoy it. When you feel that somebody cares for you so much you try that much harder. . . . Because I know that when somebody who you look up to, or somebody who has influence over what you do, or gives you feedback, they care about your well being, care about what you want, and care about letting you take the direction that you want, letting you do what is your passion.

This fourteenth construct was labelled: *a caring professor role modelling and giving permission to be self.*

For the fifteenth and final construct, the student talked about using the competency framework provided by her co-op program in her own practice as a supervisor. The competency framework is used for all students on co-op work terms. Students identify learning objectives at the beginning of the term based on a set of core competencies and discipline-specific competencies. They reference these learning objectives throughout their work term and self-assess progress made towards meeting those objectives. Their workplace supervisors also assess the progress both at the mid-term and final stages of the work term.

I have also incorporated that into the learning before the summer begins. I will sit down and talk with them, “What do you expect from me, what do you expect from yourself, how can I help you meet this? What are your own goals, how involved do you want me?” That is what I do at the beginning, in training week.

NM: So using that approach, the learning goals competency approach in your own supervision?

Yes. And then I can check in with them, and it makes it more meaningful for them. Everybody has different goals. To them it makes me seem more serious and more respected in my role, but also at the same time, taking the time to sit down, face to face, and getting to know them, getting to know their personality, they can know me. The biggest thing is that camp leaders have all these expectations but I want to know what they want from me.

This final construct was labelled: *having learning goals and competency framework in own supervision.*

### **Repertory Grid Results**

After all of the examples of transformative learning and all of the enablers had been elicited the student was then asked to rank each construct on a scale of 1 to 5 against each element. These rankings were put into the repertory grid to allow for statistical analysis and charting of similarities and differences.

Figure 6 illustrates how the student rated each enabler of transformative learning (the construct) against each identified transformative learning example (the element). The range for each of the constructs is 1-5 with a value of 1 assigned to the left hand side of the construct (the positive pole) and a value of 5 to the right hand side of the construct (the negative pole). For example, for the element of “working with cohorts who are not like you” the construct of “a family friend who is a role model and mentor” garnered a rating of 4 and, as such, was seen as a less powerful enabler of this element. The construct of “learning new theories and techniques” was rated 1 and thus deemed to be a strong enabler of this transformative learning example.

Display Case A: Student S  
"To elicit enablers of transformative learning"

a family friend who is a role model and mentor	4 4 2 2 1 3 1 3 1 1	no mentor
having a strong sense of right and wrong	3 1 1 1 1 2 3 4 1 1	no strong value system
Supportive family	2 4 2 4 1 3 1 3 1 1	Unsupportive family
Respected Supervisor	3 1 1 2 1 3 2 3 2 1	Supervisor that don't respect
Role models in supervisor	3 1 1 2 1 2 2 2 2 1	no role model in supervisor
Supportive feedback from supervisor	4 1 1 2 1 3 1 3 1 1	No supportive feedback from supervisor
Autonomy to express self and values	4 1 1 1 1 1 2 1 1 1	No autonomy to express self and values
Learning new theories and techniques	1 1 2 2 3 2 2 2 2 2	No opportunity for learning
Opportunity to network	3 3 4 1 2 2 5 1 4 3	No opportunity to network
Opportunity to add value on workplace	3 2 3 1 1 3 2 1 2 1	No opportunity to add value to workplace
Opportunity to share learning goals, and communications at beginning	3 2 3 2 3 1 2 1 3 1	No chance to share personal goals and communication styles
Assessment by Coordinator and supervisor that pushed past comfort zone	2 3 2 4 3 3 2 2 2 1	No Assessment by Coordinator and supervisor to push self
Being asked to do things past comfort zone	2 2 3 3 2 2 1 4 3 1	Not being asked
A caring professor role modeling and giving permission to be self	5 2 3 4 2 3 4 3 4 1	Uncaring professor
Having learning goals and competency framework in own supervision	5 3 2 2 2 1 1 1 2 1	No learning goals and competency approach with staff

Developing belief in self and capabilities
Handling a conflict situation using mediation
Helping a staff member reflect on their performance and provide support and mentorship
Need to set boundaries and learning to say no
Easier and more enjoyable to work with people who are extroverted or like me
The importance of representing your self in a genuine, consistent, caring fashion verbally and non-verbally
Building personal relationships with co-workers
Having regular communications with co-worker to ensure program success
Building a relationship with supervisor to ensure good communication
Working with co-workers who are not like you

Figure 6. Repertory Grid: Case A Student T1

Statistical results from these repertory grid results for the Case A student are presented in Table 2. A lower mean indicates that this construct was determined to be more of an enabler of transformative learning than those constructs with higher means. The means were categorized as “very useful” if they were lower than or equal to 1.7, “useful” if between 1.8 and 2.5 and “less useful” if over 2.5. A standard deviation less than 1 indicated that the construct was more frequently at play, consistent, during the transformative learning moment than those constructs with standard deviations greater than 1.

Table 2. Mean and Standard Deviation of Constructs: Case A Student T1

	<b>Standard Deviation= &lt;/=1</b>	<b>Standard Deviation=&gt;1</b>
<b>Mean = 1 to 1.7</b>	<p><b>Very Useful Enabler—</b> <b>Consistently</b></p> <p>C7. Autonomy to express self and values</p> <p>C5. Role models in supervisor</p>	<p><b>Very Useful Enabler—Not as</b> <b>Consistent</b></p>
<b>Mean = 1.8 to 2.5</b>	<p><b>Useful Enabler—Consistently</b></p> <p>C8. Learning new theories and techniques</p> <p>C4. Respected supervisor</p> <p>C10. Opportunity to add value on workplace</p> <p>C11. Opportunity to share learning goals, and communications at beginning</p> <p>C13. Being asked to do things past comfort zone</p> <p>C12. Assessment by coordinator and supervisor that pushed past comfort zone</p>	<p><b>Useful Enabler—Not as</b> <b>Consistent</b></p> <p>C2. Having a strong sense of right and wrong</p> <p>C6. Supportive feedback from supervisor</p> <p>C15. Having learning goals and competency framework in own supervision</p> <p>C1. Family friend who is a role model and mentor</p> <p>C3. Supportive family</p>
<b>Mean= 2.6 to 5.0</b>	<p><b>Less Useful Enabler—</b> <b>Consistently</b></p>	<p><b>Less Useful Enabler—Not as</b> <b>Consistent</b></p>

		C9. Opportunity to network C14. A caring professor role modelling and giving permission to be self
	<b>Standard Deviation= &lt;/=1</b>	<b>Standard Deviation=&gt;1</b>

### **Transformative Learning Elements: T2**

The student in Case A at T2 confirmed that the transformative learning experiences she had identified in time 1 were still valid. She did have some additional experiences to add to her first set as a result of her work term. The first of these was the eleventh element labelled: *Satisfaction in results gained through empowering others*. This experience came about as a result of her working with other staff and helping them to be empowered to do a good job for the children in their summer camp programs.

However, it is the point now where I don't feel I need to be recognized for anything. I like knowing that, whether it was me or the environment that I helped create, or the other people who we selected and brought in, we made this happen. Somehow it all came together. That is what happened. I don't know how to describe it. I think it is the satisfaction in knowing that you can empower others beyond your own expectations.

The shift in her thinking was to move past wanting personal recognition for a job well done, to a perspective of recognizing the work of others, and the impact on the organization's goals, a strengthening of a broader perspective and her self-formation

(Dirkx, 2012). The next new experience also reflected a shift in perspective and is labelled: *seeing big picture and realizing role one plays in lives of community*.

I felt that I have learned to take my own ego out of the workplace. And seeing the big picture for community development, for programming and recreation, versus just living in this little organization that I work for.

Her previous perspective had been focused on her performance within the organization, and, over the course of the semester, this had changed to considering the role that summer camp programming plays in the community, again developing a broader perspective and an example of systemic critical self-reflection (Mezirow, 1998).

Building on this insight, the student identified the thirteenth element labelled: *having enough self-confidence to go beyond personal contributions to see bigger picture*.

Before I was very self-focused. What can I do? What can I do? What do I need to do to better myself to make this everything that I want it to be? Now because I feel more comfortable and competent at that, I don't feel that I need to do that. . . . It is more so a comfort within yourself. "This is okay" and now go beyond yourself.

She commented on her realization that her increased self-confidence had resulted in being able to see beyond her own contributions to the broader needs of the organization. This is a demonstration of how this student became more critically reflective as she gained self-confidence. The student felt comfortable and competent during this work term, and this provided a positive emotional state that was key to supporting her reflection and transformation (Boud, Keogh, & Walker, 1985).



The fourteenth element was expressed as *recognizing personal growth* reflecting the student's transformative learning experience of realizing how much she had grown personally when comparing herself to newer camp leaders on staff.

It is really easy to focus on yourself, what you need to be doing, and then somebody else shares that same fear, or insecurity, and you know, "I can help with that." It was nice for me to recognize that in myself.

She appears to have become more self-aware and developed an increased ability to act on this awareness—a powerful outcome of transformational learning (Taylor, 1998).

The final new transformational learning experience was labelled: *understanding what is required for a motivated and creative workplace*. This is based on her observations over the course of the semester of different management styles and the impact on staff.

It is so funny, this manager is so good with the policy and procedures. Living by the values of what we hold and the rules, but makes people feel that they have to clock in, clock out and everybody is treated differently, different standards, even though they are all getting paid the same. Different exceptions. It makes people angry, "that is not fair." And then you see people on the other side, who are way too interpersonal, they don't have this and this, or you have people who are wishy washy, and they don't do anything. Their MO is to sleep it away. I'm learning all these different things.

This fifteenth element is another example of her shift from a personal perspective to one that encompassed broader organizational issues, and in this case reflects organizational critical self-reflection (Mezirow, 1998) .

### **Transformative Learning Constructs**

In reflecting upon her work term, the student added one more enabler of the transformative learning she had experienced: *being a trusted co-worker and employee*. Being the type of person in whom staff confided enabled her to learn more about the effects of various management styles on staff morale.

I think being a trusted person and having people come and talk to me about their feelings. It is also because I'm not the person that will gossip.

This added construct was a demonstration of the use of her growing relational agency (Edwards, 2009). She appears increasingly aware of and able to use her abilities as a co-worker whom others seek out and trust. This afforded her insights into her workers' feelings and helped her build strong connections within the workplace.

### **Repertory Grid Results: Case A Student T2**

The student not only added five elements and one construct, but in reviewing her rankings made some changes to those values as well. A revised repertory grid display of how this new set of elements and constructs was ranked is shown in the following figure.



Figure 7. Case a Student T2 Repertory Grid Results

As a result of these changes, new statistical results were calculated and are represented in Table 3.

Table 3. Means and Standard Deviations: Case A Student T2

	Standard Deviation= <math>\leq 1</math>	Standard Deviation= >math>\geq 1</math>
Mean = 1 to 1.7	<p><b>Very Useful Enabler—Consistently</b></p> <p>C7. Autonomy to express self and values</p> <p>C2. Having a strong sense of right and wrong</p> <p>C10. Opportunity to add value on workplace</p>	<p><b>Very Useful Enabler—Not as Consistent</b></p>
Mean = 1.8 to	<b>Useful Enabler—Consistently</b>	<b>Useful Enabler—Not as</b>

2.5	<p>C5. Role models in supervisor</p> <p>C4. Respected supervisor</p> <p>C8. Learning new theories and techniques</p> <p>C11. Opportunity to share learning goals, and communications at beginning</p>	<p><b>Consistent</b></p> <p>C6. Supportive feedback from supervisor</p> <p>C3. Supportive family</p> <p>C13. Being asked to do things past comfort zone</p>
<b>Mean= 2.6 to 5.0</b>	<p><b>Less Useful Enabler—Consistently</b></p> <p>C12. Assessment by coordinator and supervisor that pushed past comfort zone</p> <p>C14. A caring professor role modelling and giving permission to be self</p>	<p><b>Less Useful Enabler—Not as Consistent</b></p> <p>C15. Having learning goals and competency framework in own supervision</p> <p>C1. Family friend who is a role model and mentor</p> <p>C16. Being a trusted co-worker and employee</p> <p>C9. Opportunity to network</p>
	<b>Standard Deviation= &lt;/=1</b>	<b>Standard Deviation=&gt;1</b>

The ranking of the constructs against the elements in the Kelly RG allows for an analysis of similarities between elements and constructs. The interview in T2 examined these

similarities that were made evident in the Figure 11 with the sideways “v” shaped lines on the far right of the chart. The smaller the “v” the more closely the items matched. In order to ensure that the elements and constructs did represent unique items, these matches were examined in the T2 interview.

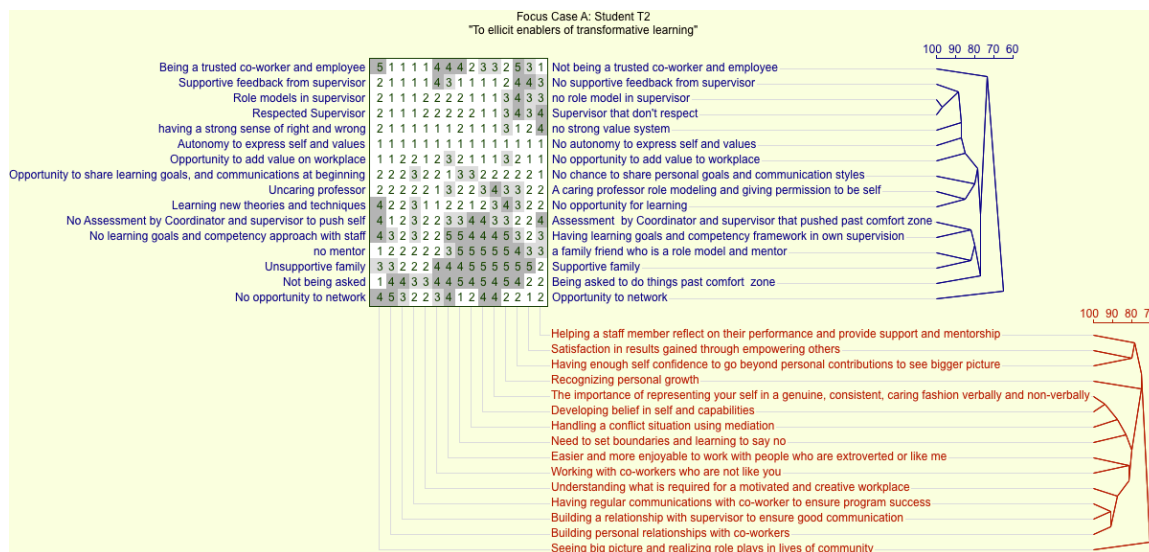


Figure 8. Focus of Elements and Constructs Case A Student T2

The repertory grid software allows for the calculation of matched elements and constructs based on the construct ratings against each element. The elements: *transformational learning experience of the importance of representing yourself in a genuine and consistent caring fashion* was very closely aligned with *developing belief in self and capabilities*. The student explained this alignment:

I just feel that you should live out. For me, I just feel that my duty, I want to be the best that I can be. I want to make other people happy. What brings me happiness, I'm a very grateful person. Every single day I'm so happy to be alive. I'm very thankful. Because I feel that I understood that lesson in my life, and you

have to remind yourself every single day. When I meet people, or work with people, I like to share that with them. That is very much myself. My belief is that you only have this much time in the world; leave it in a better place than you came into it with.

NM: The connection then is that by having that belief in yourself, the capabilities, that is linked to this one because it is important to “walk the talk?”

That is exactly it.

The next set of elements that were loosely aligned were: *having regular communications with co-workers to ensure program success,*” and *building a relationship with a supervisor to ensure good communication.* The student explained this close match as being linked with the importance she places on verbal communication:

Just to make sense of myself and everything, I like to talk. When I talk I also understand it better. I process it. The more that I talk with my colleagues, I grow stronger as well.

The two constructs of: *the role model in supervisor* and *respected supervisor* were closely matched. The student explained why they were a close match, and also separate constructs:

Yes, I think they are separate things. It is possible to respect somebody but not look up to them. Either way, I respect everybody.

Finally, the constructs of *a caring professor role modelling and giving permission to be self* and *learning new theories and techniques* were closely aligned. The student

explained this match as a consequence of the interview occurring while she was on a work term as opposed to during an academic term. She associated both the “caring professor” construct and the “learning new theories and techniques” within an academic context. This explained the connection between these two constructs, yet that they should still be separate and distinct:

I don't know. It is also easy. I'm in my work mode and I'm not really thinking a lot.

In summary, when exploring the matches between some of the elements and constructs the student articulated an underlying rationale for these matches and for keeping them as separate transformational learning examples and enablers.

### **Narrative Analysis: TI**

The Kelly RG allowed for the articulation of explicit elements and constructs, and the weighting of these against one another. This section provides an analysis of the interview narrative and an examination of themes that emerged. These themes were identified as a result of clustering the narrative results according to thematic areas that appeared from analyzing and re-analyzing the words spoken by the interviewee. Identifying these latent themes offers a deeper understanding of the elements and constructs that were made evident through the elicitation done using the repertory grid. As a result of this analysis, six major themes emerged from the narrative: *autonomy, communication, confidence, self-awareness and validation, empowered to make a difference, and supportive community.*

The student identified *autonomy* occurring in a number of areas: in the setting of her own personal learning goals, in the workplace and in the classroom. Having this autonomy allowed the student to be more creative and expressive leading to a positive emotional state:

That sense of autonomy makes it more enjoying and fulfilling for the student.

The theme of *communication* was evident throughout the interview. The student discussed the use of both verbal and non-verbal communication as a way to demonstrate caring, build relationships and trust with her supervisor and co-workers.

Making people feel that they can say hi to you, or talk about whatever . . . feel that they can trust you and that you are not going to tell other people. I think it is mostly in the way you present yourself, the way that you talk to other people, your body language and making sure that other people know that you are genuine, I guess, that you actually care about what you do and care about them. Consistently talking.

The student articulated her preferred way of communicating: “upfront” and “face-to-face:”

To me it is much more rewarding to talk to somebody face to face. It is interesting when you are talking, you get asked questions, you stop and go, “What do I mean when I say that?”

*Confidence, the lack of it and the development of it*, was another latent theme. The student expressed her lack of confidence as being “unsure,” wondering if she was



“stepping on toes,” being intimidated and keeping herself “small” and “holding back.”

This lack of confidence was based on anxiety about letting herself and others down:

Would I let down myself, other people? Would I not be organized enough?” I was very insecure about that.

Confidence boosters were described as being “supported,” receiving “positive reinforcement,” being “recognized” and “appreciated,” being asked to “try new things,” and “receiving feedback.” These boosters helped her develop self-confidence, allowing her to engage despite her insecurities:

I decided just to take a chance. Go for it...

It was scary, but it made me more confident in myself.

The next latent theme, *self-awareness and validation*, encompassed sub-themes about the student’s values, passions, attitudes, boundaries, learning style, leadership style and career direction. Having this self-awareness was a grounding influence for the student and provided her with a moral compass, personal satisfaction and validation:

Know who you are at your core and hold on to that and not let that go. Always do what you think is right. No matter if nobody else sees it, but to do what is right for you.

The next theme, *being empowered to make a difference*, flows from the student’s self-awareness and validation. She expressed the desire to “leave a legacy,” have an “impact” and “to feel important” and make a meaningful difference through empowering others:

That I get to give back, that I get to teach somebody. That I get to give something that is not going to disappear the next day. It is something that is going to stay with them. It is something that they are going to remember, that I'm not going to be forgotten.

The final theme is that of a *supportive community* made up of family, friends, a professor, her supervisor and co-workers. The support she received from this community included: listening “without judgement,” role modelling by someone she “respects,” caring and motivation. These support allowed her to pursue her direction and passions:

Because I know that when somebody who you look up to, or somebody who has influence over what you do, or gives you feedback, they care about your well being, cares about what you want, and cares about letting you take the direction that you want, letting you do what is your passion.

In summary, the themes that emerged in an analysis of the TI interviews were: *autonomy, communication, confidence, self-awareness and validation, empowered to make a difference, and supportive community*. In some cases these themes reinforced the constructs made explicit through the RG. For example: family friend and mentor, supportive family, supportive feedback from supervisor, and a caring professor are all part of a supportive community. The theme of autonomy includes the construct of autonomy to express self and values. However, the narrative analysis made more evident the latent themes of developing confidence and becoming more self-aware of her capabilities.

## **Narrative Analysis: T2**

The T2 interview confirmed the narrative themes identified in T1: autonomy, communication, confidence, self-awareness and validation, empowered to make a difference, and supportive community. In T2, the theme relating to communication included narrative describing how challenging communication led to the student's personal growth:

I need people to challenge me and my decisions because it makes me grow when people question me. . . . To grow and to be better, you have to be open to criticism . . . the more that I talk with my colleagues, I grow stronger as well.

Furthermore, in T2 there was additional emphasis on career direction, empowering others, supporting others, and seeing the big picture:

I felt that I have learned to take my own ego out of the workplace. And seeing the big picture for community development, for programming and recreation, versus just living in this little organization that I work for.

The student validated the importance of added time in the workplace and how that allowed her to reflect back on her personal growth:

And a longer time period, to see “wow this really has changed.”

This added time was a component that empowered her to shape her experience and confirm her career direction.

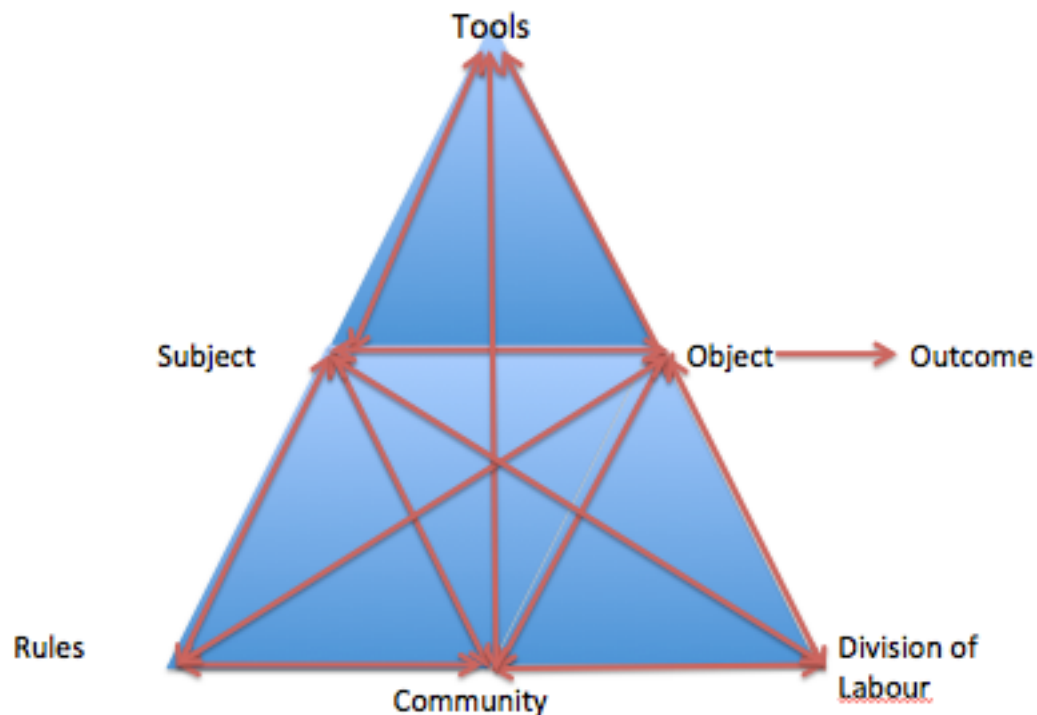
It is creating opportunities for yourself. For your resume, putting on things like creating your own program, the work experience that you have. . . . Why would I

get into recreation health education if I didn't care about other people? . . . From my core, I want to make the world a better place.

In summary, through the RG analysis and the narrative analysis, the student seems to shift from TI to T2 towards a more confident, self-aware individual who is more focused on the external than the self. She is beginning to recognize the role she could play in the broader community currently and in the future. The role of communication, and the processes of questioning, challenge and critique are illustrations of how the enablers of this expansive learning were mediated by dialectical process.

### **Data Interpretation and Discussion: Student Case A TI**

The data gathered in the interviews and analyzed with the RG are interpreted in the following section using activity theory. Activity theory provides framework through which to interpret the constructs that have been identified and how they interact to enable transformative learning.



β

Figure 9. Activity System

Considering the activity theory triangle and using the descriptions of the dimensions of the system as described by Roth and Lee (2007) and Marken (2006), the student's constructs appear to map onto the areas of the triangle as follows:

1. Tools (the means by which the activity takes place). From the WIE program and workplace: *the learning of new theories and techniques (C8), opportunity to share learning goals and communications at the beginning of the term (C11), the assessment done by the coordinator and supervisor that pushed her past her comfort zone (C12) and, having learning goals and competency framework in her own supervisory role (C15)*. From the workplace: *opportunity to add value on the workplace (C10)*;

2. Rules (the cultural norms, standards, guidelines). From the workplace: *autonomy to express self and values* (C7);
3. Subject (student: From the WIE program: *having a strong sense of right and wrong* (C2);
4. Subject (supervisor). From the workplace: *the respected supervisor* (C4), *role model supervisor* (C5), *supportive feedback from the supervisor* (C6) and *being asked to do things past comfort zone* (C13);
5. Community (socio-cultural environment in which the activity takes place). From the WIE program: *a caring professor role modelling and giving permission to be self* (C14). From the workplace: *the opportunity to network* (C9). (Marken, 2006; Roth & Lee, 2007); and
6. Division of Labour (DoL). None found.

Given that both the WIE and workplace activity systems are nested within a broader socio-cultural environment, the student identified enablers that reside within this context: *a family friend who is a role model and mentor* (C1) and *a supportive family* (C3).

The mapping of the student's constructs onto both the WIE and workplace activity systems is shown in Figure 10:

## WIE and Workplace Activity Systems

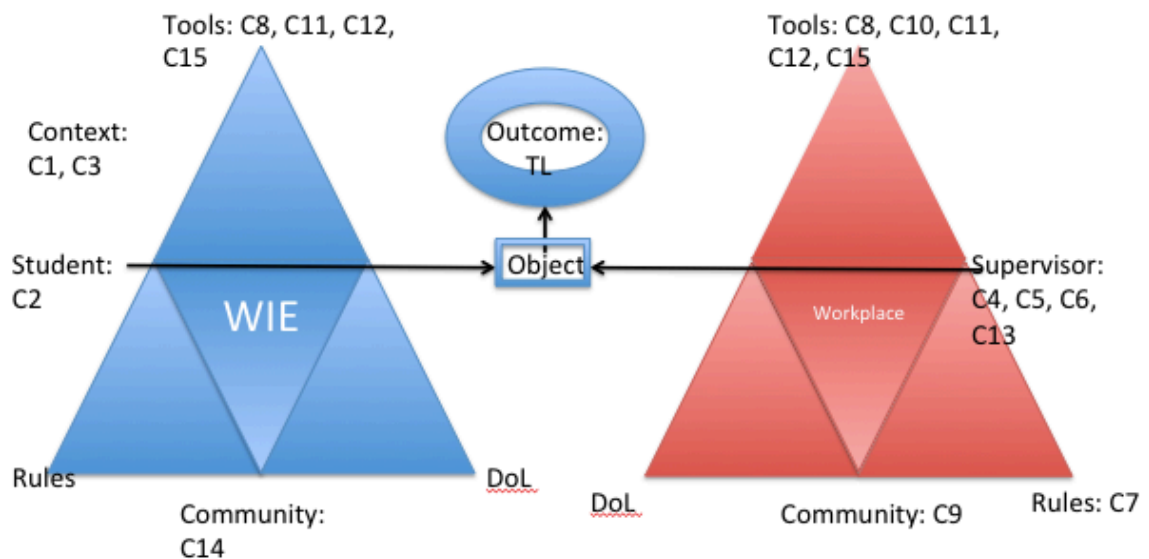


Figure 10. Activity Systems With Construct Mapping: Case A Student T1

Constructs not contained within these two activity systems, but rather part of a broader socio-cultural context were: C1 *a family friend role model* and C3 *supportive family*.

### Dynamism in the Activity Systems

While these constructs map onto the Activity Triangle, they are not static, but rather act in a dynamic fashion with respect to each other and with each element (Engeström, 1987). To consider the dynamic tensions and contradictions seen in the system, refer to the figure of the Activity Triangle (above) with arrows pointing toward and from each point. The tools influence and are influenced by the subject, the object, the rules, the division of labour and the community and so it is for each point in the system (Avis, 2009).

## Dynamism Within WIE Activity System

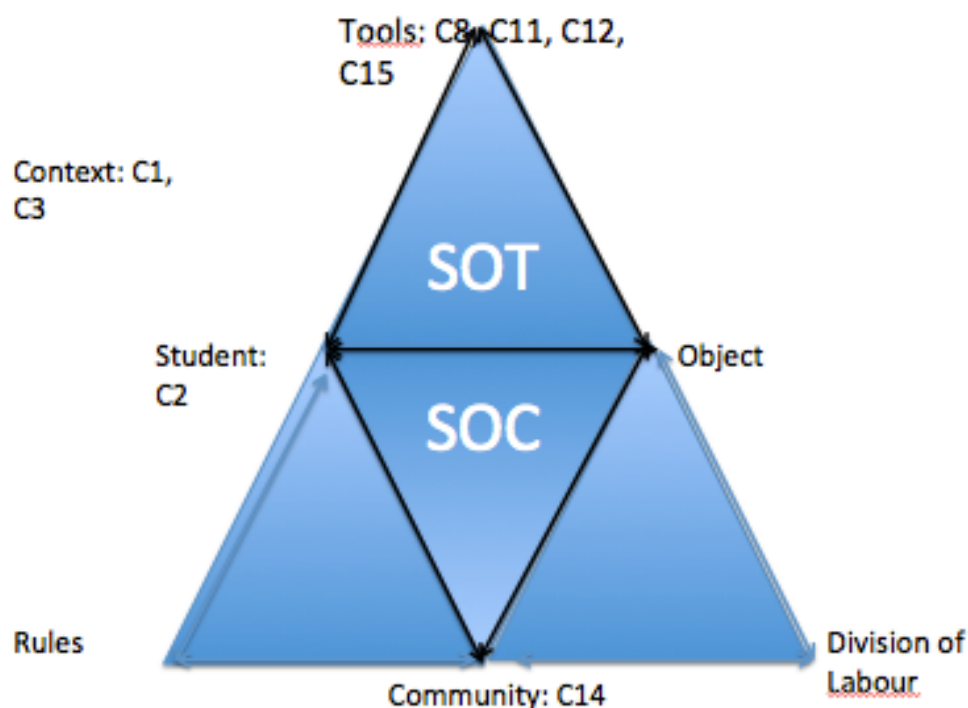


Figure 11. Dynamism Within WIE Program Activity System

In the case of Case A Student TI and her WIE system, these relationships show up most strongly within the Subject (student)-Object-Tools (SOT) and Subject-Object-Community (SOC) sections as illustrated in Figure 11. The SOT section includes the influences of the student's personal life outside of the WIE program in the form of a *trusted family friend who acts as a mentor* (C1) and her *supportive family* (C3). These contextual elements, reflected in the narrative theme "supportive community," provided her with support, enabling her to have and act upon her *strong sense of right and wrong* (C2). These contextual elements demonstrate the nestedness of the activity system in the broader socio-cultural context and reflect that no component of any activity system operates in a vacuum, but rather is made of its own set of activity systems (Jonassen & Rohrer-Murphy, 1999). These constructs, the tools from her WIE program identified in



this case are: *the learning of new theories and techniques* (C8), *opportunity to share learning goals and communications at the beginning of the term* (C11), *the assessment done by the coordinator and supervisor that pushed her past her comfort zone* (C12) and, *having learning goals and competency framework in her own supervisory role* (C15).

Activity theory focuses on the dynamic nature between activity, or the reflection on activity, and meaning making (Jonassen & Rohrer-Murphy, 1999). These constructs identified by the student are tools to support reflection: the setting of learning goals, the assessment where these goals are reflected on, the supervisor and coordinator then pushing her past her “comfort zone,” a competency framework that she used both to reflect upon her own learning, but also in her duties as a supervisor. These tools are designed to support critical reflection, the antecedent to transformative learning (Mezirow, 2000). Engaging in a dialectical and mediated process, as expressed in the narrative theme “communication,” provided an opportunity for the student to learn to think for herself (Mezirow, 1998) and experience transformative learning. These reflection-in-action processes (Schön, 1987) allowed the student to question her underlying assumptions and change her mental models which, in turn, shaped her future action. Her perspective moved towards the “big picture.”

An additional area of dynamism is in the Subject- Object-Community (SOC) section of the system. The student identified a *caring professor role model* and *giving permission to be self* (C14) from her WIE program community. This professor, part of her “supportive community,” had a profound impact on the student as a role model and also as someone who influenced her to be herself. The dynamism within this sub-triangle resulted in the student reflecting upon how she would like to be a role model in the

workplace and with others while being true to herself and her values, captured in the narrative theme “self-awareness and validation.” The support provided by this professor speaks to the importance of a holistic, positive environment in fostering transformative learning (Taylor, 2008). In addition, this demonstrates an example of how important relationships are in helping one to understand the world and come into being (Taylor, 2008).

Figure 12 illustrates the dynamism within the workplace activity system. The most active area of this activity system for the workplace is between the Subject (supervisor)-Object-Tools (SOT) section of the activity triangle. The workplace afforded: *the learning of new theories and techniques (C8), opportunity to share learning goals and communications at the beginning of the term (C11), the assessment done by the coordinator and supervisor that pushed her past her comfort zone (C12), having learning goals and competency framework in her own supervisory role (C15), and opportunity to add value on the workplace (C10)*. Transformative learning was enabled in the workplace system through specific opportunities made available and support for critical reflection (Mezirow, 2000). Meaningful opportunities and critical reflection were enabled through vehicles such as the setting and assessment of learning goals and the use of the competency framework.

When students set their learning objectives, in consultation with their supervisor, this reinforces that the workplace is a site of learning and, as such, the work should be meaningfully related to the students’ academic program with the intention that the learning will build understanding and competency. The assessment of this learning, and the competency development, occurs at the mid-point and end of the work term with the

use of the competency framework linked to the attainment of ten core, discipline specific and cross-cultural competencies. The supervisor's contribution to this reflective and transformative process is made evident in the identification of the constructs: *the respected supervisor (C4)*, *role model supervisor (C5)*, *supportive feedback from the supervisor (C6)* and *being asked to do things past comfort zone (C13)*. This feedback, the support, role modelling and "pushing the student past her comfort zone" provided by the supervisor are examples of dynamic, mediated processes that supported reflection-on-action as well as reflection-in-action and enabled the outcome of transformative learning (Schön, 1987).

These processes and the ensuing transformation occurred within a positive, supportive environment that facilitated the student's ability to move closer towards what Dirkx (2012) referred to as self-formation, the deepening and broadening of consciousness and sense of meaning about ourselves and the world (p. 404).

Another area of activity is in the Subject-Object-Community (SOC) sub-triangle where the construct *Opportunity to network* operates in the dimension of community. It appears the networking triggered critical reflection and enabled transformative learning by providing the student with a wider community to engage with and to gain perspectives about the work she was doing and could do. This networking also contributed to the student's network of relationships helping her develop relational agency (Edwards, 2009).

The findings from the narrative analysis identified the themes of: "autonomy," "communication," "confidence," "self-awareness and validation," "empowered to make a

difference,” and “supportive community” all of which helped to describe how these enabling constructs worked within each Activity System.

## Dynamism within Workplace Activity System

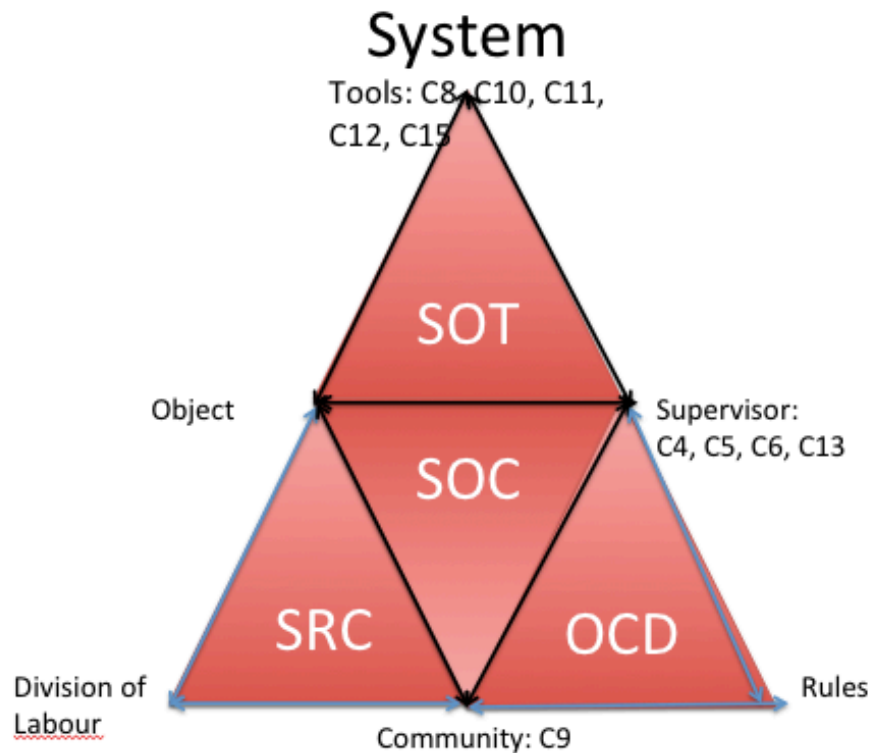


Figure 12. Dynamism Within Workplace Activity System

### Strength of Constructs

To examine the strength of the relationship of the constructs against the elements, the means and standard deviations presented in this analysis were used to map the constructs as: very useful-consistently, very useful—not as consistent, useful—consistently, useful—not as consistent, less useful—consistently and less useful—not as consistent.

The “very useful and consistent” or very strong enablers (mean scores from 1-1.7 and standard deviations less than and equal to 1.0) were seen as consistently very useful towards enabling transformative learning across all of the transformative learning experience elements. Categorized according to Activity theory they are mapped as:

- Rules: Workplace *Autonomy to express self and values* (C7); and
- Subject: The workplace supervisor *Role model in Supervisor* (C5).

No constructs were identified that were rated to be within the “very useful enabler—not as consistent” category, or strong enabler. However, several constructs emerged as “useful—consistently.” These constructs (mean scores from 1.8-2.5 and standard deviations less than and equal to 1.0) were seen as consistently useful towards enabling transformative learning across all of the transformative learning experience elements and have a moderate influence. Categorized according to activity theory they map onto:

- Tools: WIE program: *learning new theories and techniques* (C8), *opportunity to share learning goals, and communications at beginning* (C11) and *assessment by coordinator and supervisor that pushed past comfort zone* (C12);
- Tools: Workplace: *learning new theories and techniques* (C8), *opportunity to add value on workplace* (C10), *opportunity to share learning goals, and communications at beginning* (C11) and *assessment by coordinator and supervisor that pushed past comfort zone* (C12); and
- Subject: Workplace Supervisor: *respected supervisor* (C4) and *being asked to do things past comfort zone* (C13).

“Useful—but not as consistent” constructs (mean scores from 1.8-2.5 and standard deviations greater than 1.0) were seen as useful towards enabling transformative learning

across all of the transformative learning experience elements, but not as consistently applied. Categorized according to Activity theory, they are mapped as:

- Tools: WIE Program and Workplace: *having learning goals and competency framework in her own supervisory role (C15)*;
- Subject: Student: *Having a strong sense of right and wrong (C2)*;
- Subject: Workplace Supervisor: *Supportive feedback from Supervisor (C6)*; and
- Context: WIE Program: *a family friend who is a role model and mentor (C1)* and *Supportive family (C3)*.

The final set of constructs (mean scores from 2.6-5.0 and standard deviations greater than 1.0) were seen as less useful towards enabling transformative learning across all of the transformative learning experience elements, and not as consistently applied. Categorized according to Activity theory. They are mapped as:

- Community: WIE Program: *A caring professor role modelling and giving permission to be self (C14)*; and
- Community: Workplace: *Opportunity to network (C14)*.

In summary, the student rated the enablers of her transformative learning such that when the means and standard deviations were calculated certain constructs appear to be more useful and more consistently applied than others. For this student at TI, her autonomy and supervisor as role model were situated in the workplace activity system as powerful mediators for her learning. She was given the freedom to question, initiate dialogue with her supervisor and co-workers, try new things, and thus fully engage in the cycle of expansive learning (Engeström, 1987). The next powerful set of mediators were shared between the WIE system and workplace system and related to her applying her

learning into the workplace, reflective practices and a supportive environment. For this student, the challenges to supporting critical reflection outlined by Hanson (2013) were overcome. She was given the time for critical reflection that was clearly valued by her WIE program and workplace. The institutional requirements of the workplace allowed for her autonomy and the requirements of the WIE program provided a mechanism for reflection-in-action and reflection-on action (Schön, 1987). The support she received in her social context gave her the positive emotional space required to allow that critical reflection to become transformational (Hanson, 2013). These findings were further confirmed in the latent themes that emerged from the narrative analysis: autonomy, communication, confidence, self-awareness and validation, empowered to make a difference, and supportive community.

### **Connectivity Between WIE and Workplace Activity Systems**

Figure 13 illustrates the connectivity between the WIE and the Workplace activity systems. For this student, Case A at TI, the constructs *learning new theories and techniques* (C8), *opportunity to share learning goals, and communications at beginning* (C11), *assessment by coordinator and supervisor that pushed past comfort zone* (C12) and *having learning goals and competency framework in own supervision* (C15) were constructs that were a part of the Activity systems for both the WIE program and the workplace.

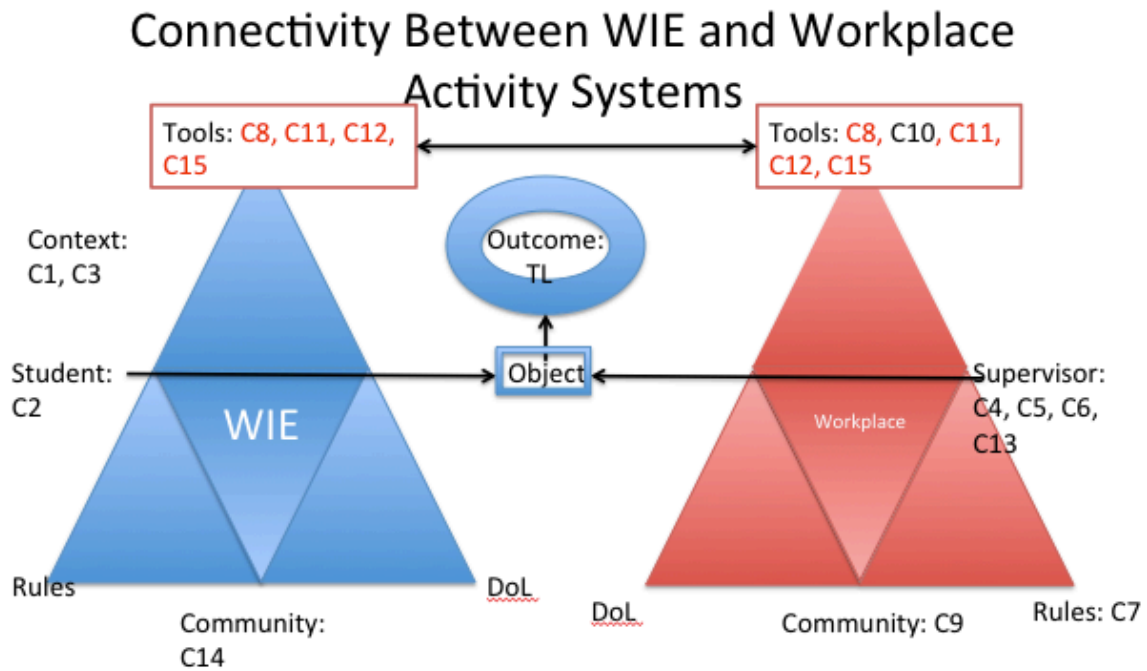


Figure 13. Case A Student T1: Connectivity Between WIE and Workplace Activity Systems

These tools provide connectivity between the two systems and can be seen to act as boundary spanners, one of the developments found in third generation Activity theory (Engeström, 2009). Learning new theories and techniques is a tool that occurs in both the WIE program and the workplace and is applicable to each. The WIE program's system of setting learning goals, assessment and a competency framework are applied in the workplace, both with the student herself and in her role as a supervisor of others.

### Data Interpretation and Discussion: Student Case A T2

The additional construct C16: *being a trusted co-worker and employee* fits onto the subject: student component of the WIE Activity System. This change is shown in Figure 14 of the two WIE and Workplace Systems.



## WIE and Workplace Activity Systems

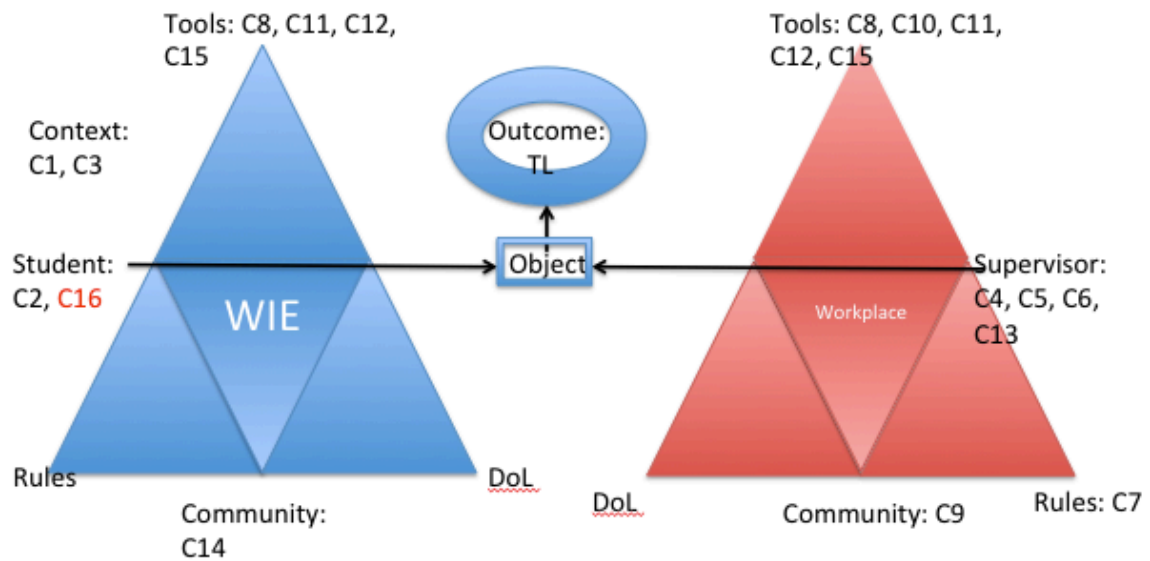


Figure 14: Activity System With Construct Mapping: Case A Student T2

### Dynamism in the Activity Systems

The WIE program system is the only area that added a construct, and as a result the change in the dynamism of that system remains located in the Subject-Object-Tools (SOT) area of the Activity system, and is depicted in Figure 15, below.

## Dynamism Within WIE Activity System

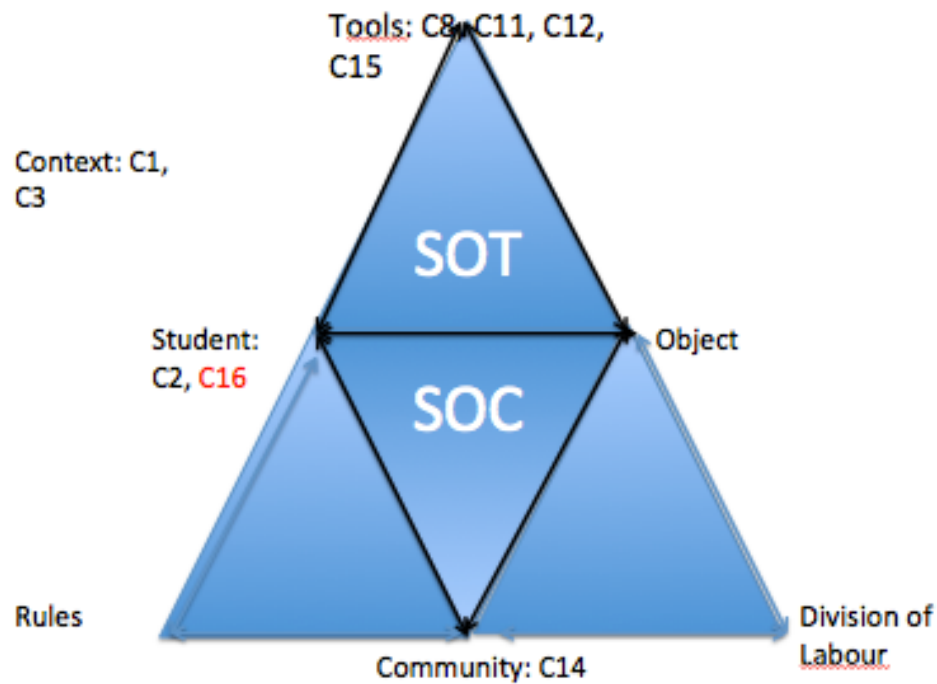


Figure 15. Dynamism Within WIE Program Activity System: Case A Student T2

The student described how *being a trusted co-worker and employee* positioned her as a confidant of others. This resulted in increased communications with her about management practices and effects on fellow staff members. This added communication provided her with an additional tool to be applied in the workplace as she gained perspective and a deeper understanding of how the organization functioned and how she would want to be a manager herself in the future, a demonstration of the process of expanded learning supporting organizational critical self-reflection (Engeström, 1987; Mezirow, 1998). This deepening understanding of herself and how she wants to be in the world came about due to the dynamic nature of the system at play and contributed to the transformation outcomes of self-formation (Dirkx, 2012) and relational agency (A.

Edwards, 2009) She noted the importance of this relational agency in the following passage:

I like forming these relationships because I feel that if somebody gets to know me and they know that the core of me is that I care about these children, yes, I'm a nice person, yes I will be your friend, but at the end of the day it comes down to these kids. I think I'm very firm on that. I think that a lot of the respect that people have for me, comes from that.

### **Strength of Constructs**

The student revised the ratings she had given the constructs in T1, and as a result, some became more useful in her mind than others. In T2, the constructs of *opportunity to add value in the workplace* and *having a strong sense of right and wrong* became stronger. The constructs of *assessment by coordinator and supervisor that pushed past comfort zone*, *role model in supervisor*, *a family friend who is a role model and mentor*, and *having learning goals and competency framework in own supervision* became weaker.

Gathering these data in T2 provided a glimpse into how activity systems are not only internally dynamic at any given time, but are constantly evolving as the subjects interact with the mediators of the system. Thus the interactions were dynamic over time allowing an opportunity, in this case, to consider changes in the subject's transformation over the course of a work term (Keengwe & Jung-Jin, 2013). Giving recognition to the role that time plays is an important addition to our use of activity theory in understanding change, and speaks to historicity, one of the theory's underlying principles (Avis, 2009; Engeström, 1987; Roth, 2010).

**Strength of Constructs: Based on Experience Perspective**

Referring to Fenwick (2000), a finding from this research is that even though WIE programs have a constructivist perspective, many of the transformative learning experiences of the student fell within the other quadrants of the Fenwick model. Of the fifteen transformative learning experiences identified in T1 and T2, only two could be classified as constructivist. The transformative learning experiences, or elements, can be categorized according to perspective as based on Fenwick (2000), shown in Table 4, below.

Table 4. *Case A Student T2: Transformative Learning Elements*

<p style="text-align: center;"><b>Constructivist</b></p> <ul style="list-style-type: none"> <li>• Helping a staff member reflect on performance, provide support and mentorship</li> <li>• Handling conflict using mediation</li> </ul>	<p style="text-align: center;"><b>Critical-cultural</b></p> <ul style="list-style-type: none"> <li>• Working with co-workers not like you</li> <li>• Easier, more enjoyable working with extraverts like me</li> <li>• Seeing big picture and realizing role plays in lives of community</li> <li>• Understanding what is required for a motivated and creative workplace</li> </ul>
<p style="text-align: center;"><b>Psychoanalytic</b></p> <ul style="list-style-type: none"> <li>• The importance of representing self in a genuine, consistent, caring fashion</li> <li>• Need to set boundaries, learning to say “no”</li> <li>• Developing belief in self and capabilities</li> <li>• Having enough self-confidence to go beyond personal contributions to see big picture</li> <li>• Recognizing personal growth</li> </ul>	<p style="text-align: center;"><b><u>Situative</u></b></p> <ul style="list-style-type: none"> <li>• Building a relationship with supervisor to ensure good communication</li> <li>• Having regular communications with co-workers</li> <li>• Building personal relationships with co-workers</li> </ul> <p style="text-align: center;"><b><u>Enactivist</u></b></p> <ul style="list-style-type: none"> <li>• Satisfaction in results gained through empowering others</li> </ul>

Table 4 shows TI elements in black and T2 elements in red, and demonstrates a shift in the student’s transformative learning experiences towards the psychoanalytical, critical-cultural and enactivist perspectives as a result of the student’s systemic and organizational critical self-reflection within a positive and supportive environment.

The idea of change over time was carried over to an examination of the changes in the ratings of the constructs as applied against their perspective. With each perspective, the

change in ratings caused some to appear stronger and others weaker. Within the constructivist perspective, the following constructs remained strong and stable from T1 to T2:

- A family friend who is a role model and mentor;
- Having a strong sense of right and wrong;
- Supportive feedback from supervisor;
- Autonomy to express self and values; and
- Opportunity to add value on workplace.

In the critical-cultural perspective all of the ratings changed. In the psychoanalytical perspective all constructs, with the exception of *having a strong sense of right and wrong*, which remained strong, were affected by rating changes. Finally, in the situative and enactivist perspectives the construct of *autonomy to express self and values* remained unchanged and strong.

The constructs that demonstrated the most stability over time were: *autonomy to express self and values* and *having a strong sense of right and wrong*. These value based constructs speak to the student's ethico-moral (Roth, 2009) stance that she maintains throughout this term and how this stance enabled her transformation. The student speaks to this stance in the following passage:

I want to make the world a better place. I think that starts small, within your own life, within you and I think it spreads to your family, your friends, and your workplace. Even if it is the smallest thing, I believe that it ripples out. Taking on that ownership of yourself, and being the best person you can be, being a nice person.

## Connectivity Between WIE and Workplace Activity Systems

Figure 16 represents the connectivity between the WIE academic and the workplace activity systems. These points of connectivity (C8, C11, C12 and C15) remain unchanged in T2 from T1 and demonstrate the stability of the boundary spanning tools of sharing learning goals, assessment and reflection and the learning and application of theory across both systems.

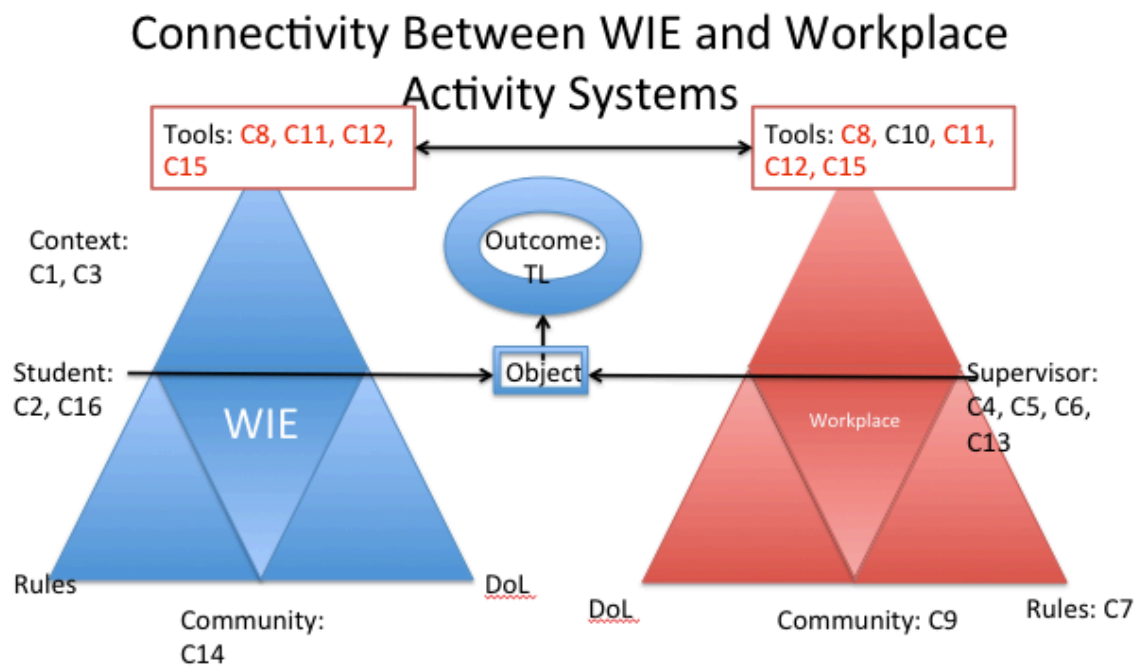


Figure 16. Connectivity Between WIE Program and Workplace Activity Systems: Case A Student T2

## Integration

The final component of the T2 interview was to explore the idea of integration of the transformative learning into the workplace and back into the WIE program. The student provided the following example:

One of our camp leaders here, he also plays on the soccer team, is in my program, has other years of universities, he is involved with this new gym downtown and great with coming up with these ideas. He is somebody that I can talk to, and I bring that into my work with (Case A Organization). Even though I interact with him a lot here, we will talk and he will give me tons of ideas. He has an idea book. And I will transform them and I will use for marketing, events, etc.

In this excerpt the student identified the enabler of *opportunity to network* having allowed her to network among fellow students and community members. This networking resulted in benefits to the workplace and is an example of the integration of her learning resulting in the introduction of new ideas of benefit to the workplace.

The student went on to provide the following example of providing benefit to her workplace through recruiting and supporting a new employee:

It is nice to feel that you can help each other and down the road she may be able to help me out. Plus she is a fantastic worker, so it makes me more valued as well, I know how to recruit.

The student commented that she had received feedback that the workplace was different as a result of her contributions, many of which stemmed from her transformative learning experiences:

I have had numerous people tell me, “You being around in the office area, I notice a totally different atmosphere, a totally different environment.”

In summary, the integration of her transformative learning became possible due to the transformative processes that were given the time and value needed by the student, by



both the WIE academic program and workplace. They each had the requirements such as assessment and reflection, and autonomous working conditions with plenty of opportunity to add value within a positive environment (Hanson, 2013). On the latter point, the student expressed her recognition of the importance of a positive environment in two ways, first regarding the positive reaction she has to her supervisor, and second, in how she tries to engender a positive environment:

It just happens that I have been lucky, my supervisor I have totally adored.

For me I need people around me to be happy and also to be competent at their work. I take that on. I try my hardest to make sure that I can help anybody who needs help, or help them understand to be better.

The result of this appears to have been the student's growth in her self-formation, in her view of the world, and in her ability to act with and for others (Avis, 2009; Holman et al., 1997; Taylor, 2008). The student summarized these results in her own words:

I think this summer, I feel that I have really come to appreciate letting other people become their own leaders, within their lives, versus me just telling them or expecting everything, the way I want to see it. . . . I like to see other people grow into their own person and being able to look back. To me that is what a good manager does, empower people to be their own leaders and their own managers.

This integration of the outcome of transformative learning back into both the WIE workplace system and academic system is depicted in Figure 17, below.

## Integration of Outcome Between WIE and Workplace Activity Systems

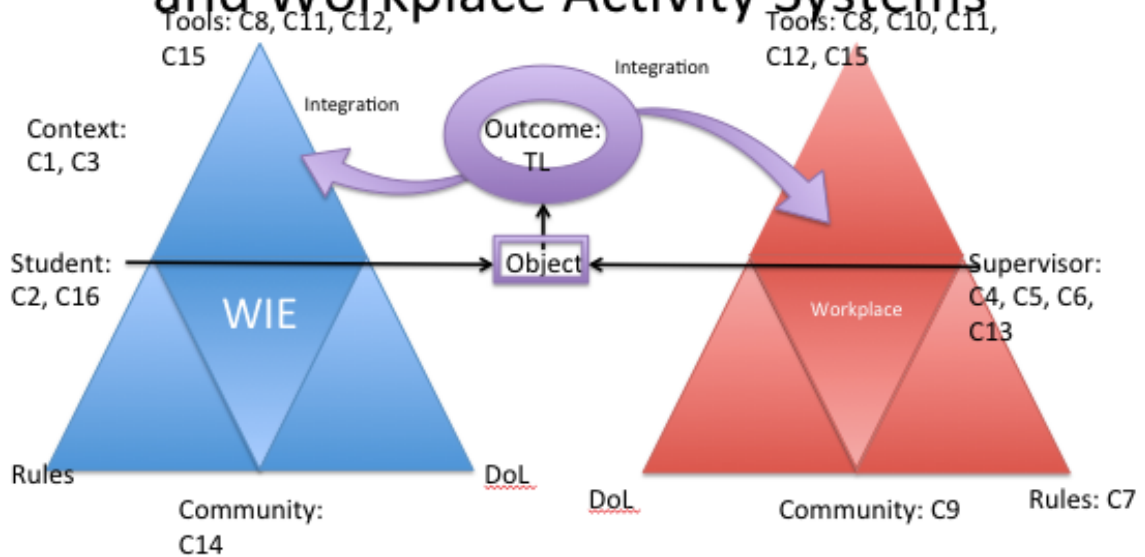


Figure 17: Case A Student Integration of Outcomes Into WIE Academic and Workplace Systems

In summary, Case A student identified a number of transformative learning experiences from a variety of perspectives that included constructivist, critical cultural, psychoanalytical, situative and enactivist (Fenwick, 2000). She identified a number of constructs that enabled her transformative learning, and these changed in strength from T1 to T2 and by perspective. Her critical reflection was supported through the interactions between and among these enablers as she navigated the positive environment of the work term: questioning, initiating and concluding and thus demonstrating the cycle of expansive learning and how reflection-in-action leads to transformation (Engeström, 1987; Schön, 1987). The resulting transformational learning led to growth in her self-formation, relational agency and ability to act and create change within the workplace. For example, over the course of the term this student experienced transformational

learning in her ability to see the “big picture.” She became less concerned with her own individual performance, less “me”-centred and more about the performance of the unit, and of the organization as a whole, more “we”-centred. She realized the importance of effective recreational programs to the wellness, not only of the children participating, but also to the staff delivering the programs, the organization as a functioning body, and the community at large. This growth in perspective came as a result of the dialectical interactions between the enablers of that transformative learning: her program, the work she was doing, the context in which she was placed, the time she had to develop within that context and her own set of capabilities.

### **Results from Interviews: Case A Supervisor TI**

#### **Transformative Learning: Elements**

The supervisor was asked to describe her understanding of transformative learning. She stated that transformative learning can happen when a student begins to think for themselves as a result of applying what they have learned in the classroom in the workplace, and in so doing test their understanding, underlying assumptions and begin to determine their own values and goals:

Sometimes what you learn in the classroom isn't necessarily going to be what transpires in the workplace. In that way they can determine their own sets of values and how they want to work. It gives them a framework of how they will go forward in their career.

The supervisor was able to identify seven elements, or examples of transformative learning that she had observed as a supervisor of co-op students. All of the examples,

except for the first one, involved the student in Case A. The first was labelled *having courage of convictions* after the supervisor described a situation where a student had a confrontation with another senior member of staff:

It made him realize to have the confidence in what you know is right. Just because the person is older than you and thinks they have more experience than you, doesn't necessarily mean that you shouldn't speak up . . . once he realized he had a voice and he knew what was right, he was able to say to the person in an articulate way.

A second example of transformative learning, labelled: *working through adversity to find a solution* came from observing a student resolving a problem with a difficult parent:

It was nice to see X take a complaint, but also ask for feedback and then was able to come up with a solution that worked.

The third example of transformative learning came as a result of this example with the same student and is labelled: *developing confidence in self*. The supervisor described the shift in the student's confidence level in dealing with a subsequent problem as a result of resolving the previous situation and the learning that transpired:

This situation she was able to deal with herself. And she communicated after the fact, "I talked to this parent, this is what happened" and filled me in. I told her she handled it great. She had the confidence to work it through with the parent and know maybe when to escalate it.

The fourth example of transformative learning was a learning experience for both the student and supervisor and was the result of a situation with a family that had enrolled a child with learning challenges into the summer program, without disclosing the challenges their child faced. This led to a number of issues for the staff who were not equipped or qualified to adequately support the child. This example was labelled: *Having to have difficult conversations with parent when options all exhausted.*

The learning is eventually if you do come to that point of “we cannot accommodate anymore, we have bent over backwards.” I think going forward we have had that experience, and that is a transformative learning too. Her and I will know how to handle it a little bit more quickly or in a different way perhaps.

In the fifth example of transformative learning the supervisor described a situation where the student had to provide repeated directions to fellow staff members who were not following expected protocols. This example was labelled: *when enforcing policies communicating consistently and following up even when difficult circumstances.* The supervisor described:

The expectation is that all leaders are in the water with the kids. She gained a lot of confidence the first time, but it happened again, and again. For her the transformative learning was that the message had to be consistent, the same every single time . . . after every time she said it they jumped in the water. And she followed through. She felt confident enough to deliver that consistent message again.

The sixth example, labelled: *adding own experience to build on training program - put her own stamp on program* emerged from the following description:

I think the transformative learning was that she was given a task, where she really got to take it and run with it. She is doing it again for this summer as well. She was able to see what went over really well, what didn't, and how can she change it.

The final and seventh example of transformative learning arose from a situation where the student was provided with an opportunity to participate in the interviewing process, and through that experience was put into the shoes of the employer and as such had to *develop awareness of the employer's perspective*. As described by the supervisor:

Having her in the interview process has been really transformative for her. She is helping me shape the kind of team that we want to hire. We have a list of questions, and if I don't necessarily think I'm getting the whole answer or there is more to it, I'll ask a secondary question that is not on the sheet of paper. She did that in her own way, right off the start.

### **Transformative Learning: Constructs**

The supervisor identified twelve constructs, the first being: *training on roles and rules*, and the second labelled: *opportunity to use own judgement and experiences* articulated as:

I gave her the green light to use her own judgement, use her experiences from past years.

The third construct called: *having confidence in the student*, was illustrated by the supervisor in the following comment:

She wasn't green to summer camps, she had worked in these situations as a leader before. Giving her my confidence.

This confidence led to the fourth construct: *working independently*:

There was a time when I was able to take a few days off. I had full trust in her.

Another enabler of transformative learning was the connections that the student had developed with other members of the unit. This enabled her to be on her own working independently because she was able to draw upon team members if needed. This fifth construct was labelled: *having connections with others in department*:

She knew she had other people she could bring in if she needed to during my absence. She made those connections and felt comfortable to draw on them.

The sixth construct, *the student's high level of maturity*, enabled transformative learning. This maturity helped the student in working with her peers:

They didn't challenge her because she showed that maturity. It was very evident in the week of training. She put a lot of time in it, and it set the tone for the summer.

The maturity level of the student set the stage for the seventh construct: *ability to gain respect of co-workers*. This ability was described as follows:

It is hard for a co-op student when they are the same age as the other leaders. She set a great line in the sand. "Yes, I'm your peer, but for the summer I'm one of

your supervisors.” That really gained the respect of the other leaders. They viewed her as that. They didn’t take her for granted.

The eighth construct, *setting of learning goals with competency framework* was described by the supervisor as enabling transformative learning by establishing what the student focused on during her term and providing clarity for the supervisor on what the student wanted to gain during the term:

That whole list of core competencies where she selects a couple where she really works on, really kind of drives how she went about her work . . . having those core competencies highlighted at the beginning. That is something that her and I went over as well, so I knew what she really wanted to work on this summer.

The ninth construct, *opportunity to be exposed to other programs/opportunities* enabled transformative learning by allowing the student to attend a large international conference where she was able to interact with other professionals and students involved in similar work and see what others are doing:

It is incredible, you see what else is out there. It is easy to get stuck on what you do in your institution. . . . Exposing her to possibilities was super valuable for her . . . meeting other students that did similar work on the other side of Canada or in the US was really great for her, to share her experiences. That was a great learning opportunity for her.

The student was able to attend workshops and engage in networking at this conference. The learning gained during these workshops was seen as enabling her



transformative learning, and the tenth construct: *opportunity to participate in professional development* was identified.

They do specific student learning workshops and seminars. She was able to go to those and take advantage of them. We also hosted a similar styled conference here and X was the student chair. She also presented a session. She had to do some public speaking at the opening and closing. She organized the volunteers.

The student would not have been allowed to attend this conference nor participate in these workshops if it she hadn't been considered a part of the team due to the length of time she had worked for the unit. This was due to her returning to this workplace for three of her co-op terms.

Because she had done these last three co-ops with us, it really has afforded us the opportunity to invest in her learning. A lot of student staff will work for us for three months and we won't see them again, whereas she is part of our team.

This eleventh construct was labelled: *length of time as an employee- ability to invest*.

The twelfth and final construct was named: *openness to learning*. The supervisor felt that this openness allowed the student to gain as much as possible from the opportunities made available, and also to become more fully immersed in the workplace.

I think for personally, her willingness to soak in as much of this and learn, in comparison to other students, is unmatched. She is super excited to be at work and is super enthusiastic to learn. I'm sure it is very competitive for co-op students out there in some of the faculties and stuff, but she really owned it. Allowing herself to be immersed in it is really important.

### Repertory Grid: Supervisor Case A T1

Figure 18 represents the ranking by the supervisor of each enabler of transformative learning (the construct) against each identified transformative learning example (the element).

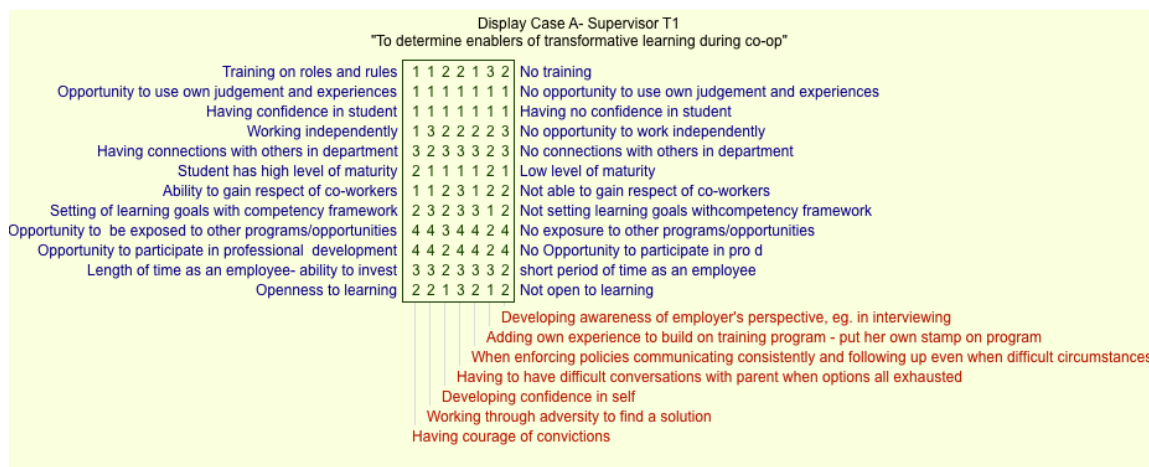


Figure 18. Repertory Grid Results: Case A Supervisor T1

Table 5 displays the statistical results from this rating of the constructs against the elements.

Table 5. Mean and Standard Deviation of Constructs: Case A Supervisor T1

	Standard Deviation= </=1	Standard Deviation=>1
Mean = 1 to 1.7	Very Useful Enabler— Consistently	Very Useful Enabler—Not as Consistent
	C2. Opportunity to use own	

	<p>judgement and experiences</p> <p>C3. Having confidence in student</p> <p>C6. Student has high level of maturity</p> <p>C7. Ability to gain respect of co-workers</p> <p>C1. Training on roles and rules</p>	
<b>Mean = 1.8 to 2.5</b>	<p><b>Useful Enabler—Consistently</b></p> <p>C12. Openness to learning</p> <p>C4. Working independently</p> <p>C8. Setting of learning goals with competency framework</p>	<p><b>Useful Enabler—Not as Consistent</b></p>
<b>Mean= 2.6 to 5.0</b>	<p><b>Less Useful Enabler—Consistently</b></p> <p>C11. Length of time as an employee</p> <p>C5. Having connections with others in department</p> <p>C10. Opportunity to participate in professional</p> <p>C9. Opportunity to be exposed to other programs/opportunities</p>	<p><b>Less Useful Enabler—Not as Consistent</b></p>
	<b>Standard Deviation= &lt;/=1</b>	<b>Standard Deviation=&gt;1</b>

## **Case A Supervisor T2**

### **Transformative Learning: Elements**

The supervisor in Case A at T2 confirmed that the transformative learning experiences she had identified in T1 were still valid. She added one additional experience to her first set as a result of the student's work term, labelled: *developing leadership abilities that help earn the respect of peers*. The student was in a supervisory position with fellow students. It can be difficult earning the respect of peers, but the supervisor had observed the student developing the leadership abilities to earn that respect:

The respect that she has even more so from the staff. Something to do with the way she conducts herself, even though she is a peer of all the students who work for us, when they come to work, every day, they see her in that supervisory role, as a leader.

This experience fits into the situative category (Fenwick, 2000) in that the student is gaining the professional skill of leadership required in her growth from learner to mastery within this particular community of practice (Lave & Wenger, 1991).

### **Transformative Learning: Constructs**

In reflecting upon the student's work term the supervisor added three more enablers of transformative learning that she had observed the first of these was labelled: *with supervisor, co-creation of values and approach to problem-solving* (C13).

It was like we developed the same sort of, not habit, but like our philosophy was similar. That is not always going to happen.

NM: Values?

Maybe values is a better word. Yes, we developed similar values in how we were going to handle difficult situations, her and I.

The next new construct was labelled: *having fresh perspective and recent experience* (C14). This was seen as an enabler, as the student had more recently been working directly in summer camps and as a result had that current perspective and experience to bring to bear on her work.

She worked front lines not that long ago, she has that fresh perspective. I have been involved in camps for 10+ years, but I haven't been a camp leader myself for 6 or 7. It is easy for me get a little disconnected from that. . . . She will bring up issues that I may not have thought about, or whatever.

The final new enabler was labelled: *student's high level of professionalism* (C15). The student was seen to have strengthened her professionalism over the course of her work term, and this enabled her gaining the respect of her peers and others.

Last summer she made that choice that she wanted to keep it professional over the summer. That helped her coming into this year as well, and I see it even more.

### **Repertory Grid Results: Case A Supervisor T2**

While she did not change any of the ratings from TI, the result of adding an element and three more constructs did alter the statistical outcome of the repertory grid

analysis. Given the stability in how the constructs were rated in T2, only the construct *training on roles and rules (C1)* moved from being in the category of very useful to useful.

In examining elements that match: *having courage of convictions* and *when enforcing policies communicating consistently and following up even when difficult circumstances*, are closely aligned with *working through adversity to find a solution*. The supervisor explained why they are aligned:

I think they are close because they are all tied to conflict, dealing with difficult problems, it is kind of a problem-solving one. That is not surprising.

The supervisor went on to identify other similar elements:

And these are close together, “developing awareness of the employer perspective,” and “developing confidence in self.” We talked about interviewing too, especially when it is your first time; you have to have that level of confidence in yourself to do things like that. As a co-op student doing that for the first time, you definitely need to come across that you are confident.

Despite the close match, the supervisor confirmed that they should still be considered separate and distinct examples of transformative learning.

In explaining the similarity between the enablers: *setting of learning goals with competency framework* and *having fresh perspective and recent experience* the supervisor stated:

I guess those are still different as well. Not only are you setting goals, but you are also bringing forward what you learned in other places and that might shape some of your future goals too.

Similarly with the following constructs:

These two, *confidence in students* and *ability to use own judgment*. That makes sense.

These two, *training on roles and rules*, and *ability to gain respect*. Yes.

NM: Why do you think those are so closely related, *training on roles and rules*, and *ability to gain respect*?

I think if you are consistent with how you train, then the employees respect you because you are sticking to your guns and you have trained them.

In summary, despite some closely matched elements and constructs, the supervisor confirmed that while the alignment made sense they were distinct examples and enablers.

### **Narrative Analysis: TI**

An analysis of the supervisor's interview narrative revealed six latent themes: time, different experience, learning and skill development, confidence, co-creation and autonomy. Time featured strongly as a theme from the supervisor. She regularly referred to the student having returned to the workplace, having worked there in a number of roles and being viewed as a member of staff:

Because she had done these last three co-ops with us, it really has afforded us the opportunity to invest in her learning. A lot of student staff will work for us for three months and we won't see them again. Whereas, she is part of our team.

As the student was returning for an additional work term, the supervisor was committed to offering her with a different experience:

This is her second time doing the co-op with us, I really wanted to change it for her second co-op. I would like her to get a different experience.

This different experience included exposure to new learning and skill development. As the student set out learning objectives, the supervisor was keen to support those objectives and offer additional learning in the areas of: interviewing, hiring, supervising, communication and leadership. The supervisor also commented on the student's willingness to learn as being evident:

Willingness to soak in as much of this and learn, in comparison to other students, is unmatched. She is super excited to be at work and is super enthusiastic to learn.

The third latent theme is that of confidence. The supervisor commented on the confidence that the student had to, and did, develop in dealing with parents and fellow staff. This confidence was demonstrated in how she was able to handle angry parents, provide solutions to problems raised by parents and continually needed to enforce regulations with staff:

She gained a lot of confidence the first time, but it happened again, and again.



The student not only displayed confidence, but also engendered confidence in her supervisor who came to view her as a co-creator of the unit's team through sharing the interviewing, hiring and training of staff:

She is helping me shape the kind of team that we want to hire.

The final theme is that of autonomy. The supervisor had such confidence in the student that she was often given free rein to manage:

I gave her the green light to use her own judgment, use her experience from past years. . . . Giving her my confidence. . . . Giving her the green light to do it herself . . . there was a time when I was able to take a few days off. I had full trust in her.

### **Narrative Analysis: T2**

The narrative themes found at T1 of: range of experiences, learning and skill development, confidence, time, co-creation and autonomy were confirmed in T2.

Communication and leadership skill development were emphasized:

A big one being this one about “having to have difficult conversations with parents, when all options are exhausted.” That has happened several times this summer.

The way she conducts herself, even though she is a peer of all the students who work for us, when they come to work, every day, they see her in that supervisory role, as a leader. . . . Developing leadership abilities that help earn the respect of peers.

The supervisor confirmed that time continued to play an important role, and that over the six years she had been a supervisor, this student:

May be the student that we have most invested in since I have been there.

The theme of co-creation was more fully described in T2 in the following ways:

We were on the same page a lot this summer. Developing a rhythm and flow that works. Part of that is because it is her second summer.

It was like we developed the same sort of, not habit, but like our philosophy was similar.

We developed similar values in how we were going to handle difficult situations, her and I . . . when you are on the same page it can really strength our relationship and help guide the day when it is difficult.

The final latent theme of autonomy was also expressed more strongly in T2, due in part to the supervisor being ill for some of the work term:

I was away, I wasn't there so she was going to have to deal with it anyway.

That was great for me, as an employer, knowing that I had full confidence in her to go and deal with really difficult situations, especially when I am sitting home sick in bed. Having to let go and trusting that she could deal with it.

### Data Interpretation and Discussion: Supervisor Case A T1

Using activity theory, the constructs (these enablers) were mapped onto the WIE program and workplace activity systems. This mapping is described below and seen in Figure 19.

- Tools (the means by which the activity takes place). From the WIE program and Workplace: *setting of learning goals with competency framework* (C8). From the Workplace: *opportunity to use own judgement and experience* (C2). *Working independently* (C4) and *opportunity to participate in professional development* (C10);
- Rules (the cultural norms, standards, guidelines). From the WIE program and workplace: *length of time as an employee-ability to invest* (C11). From the workplace: *training on roles and rules* (C1);
- Community (socio-cultural environment in which the activity takes place). From the workplace: *having connections with others in department* (C5) and *opportunity to be exposed to other programs/opportunities* (C9);
- Subject: Student: *student has high level of maturity* (C6), *ability to gain respect of co-workers* (C7), and *openness to learning* (C12); and
- Subject: Supervisor: *having confidence in student* (C3).

## WIE and Workplace Activity Systems

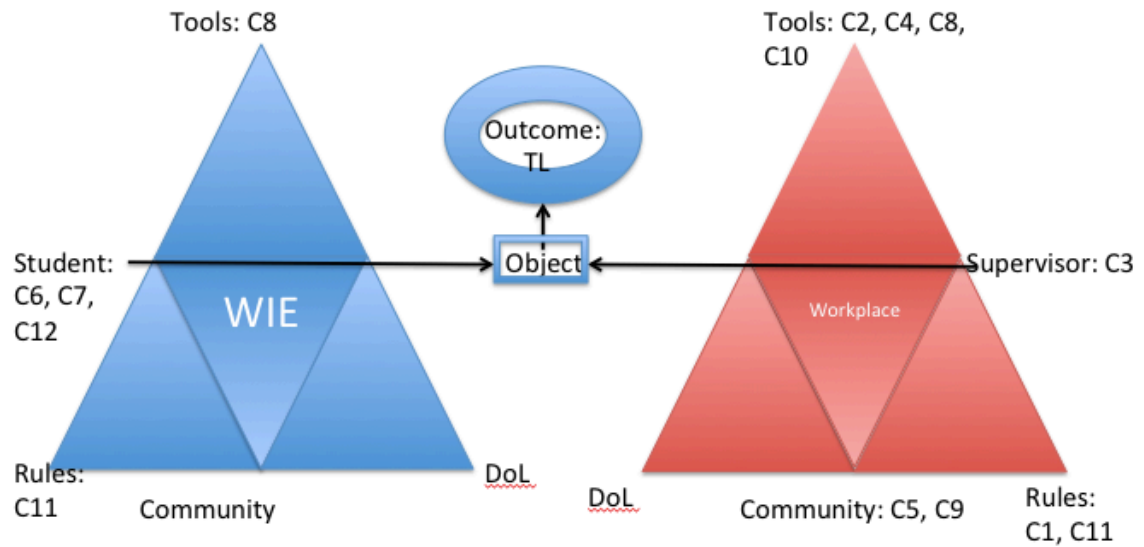


Figure 19. Activity System With Construct Mapping: Case A Supervisor T1

### Dynamism in the Activity Systems

As in the case of the student, these constructs act in a dynamic fashion with respect to each other and with each element. In the case of Case A Supervisor T1 and her WIE system, these relationships show up most strongly between the Subject (student)-Object-Tools (SOT) section and the Subject-Rules-Community (SRC) sub-triangle as shown in Figure 20.

## Dynamism within WIE Activity System

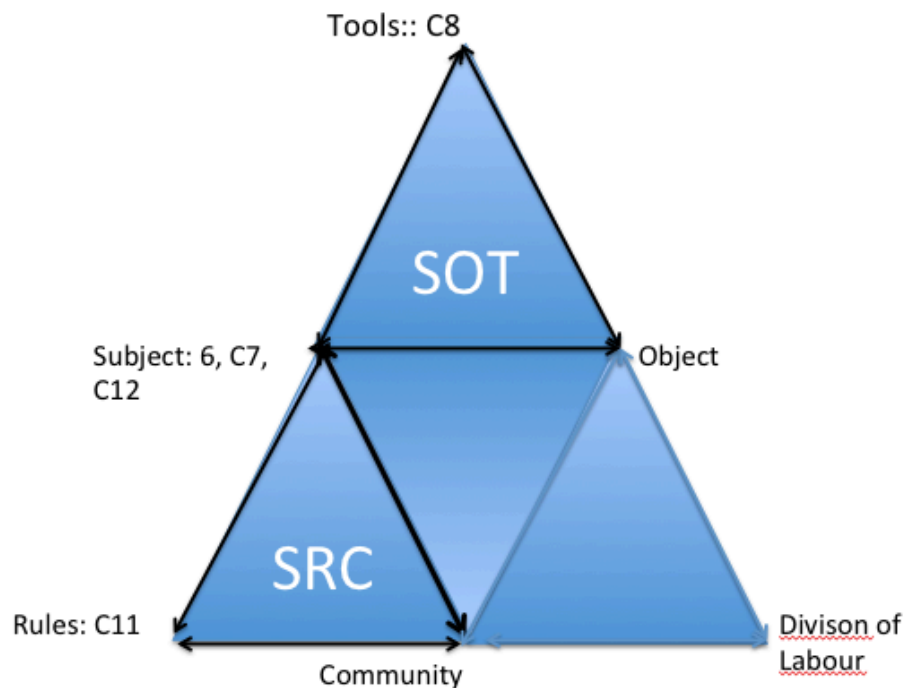


Figure 20. Dynamism Within the WIE Program: Case A Supervisor T1

Within the SOT sub-triangle the relationship between the tools of *setting learning goals with competency framework* complemented the student's *openness to learning* enabling her transformative learning. The constructs of *student has high level of maturity* and also the *ability to gain the respect of co-workers* enabled her to approach her work appropriately and garner the support of her workplace community to better handle the work requirements. Having the institutional requirement from the WIE program to set learning goals and assess these goals throughout the progress of the work term provided time and value to allow for reflection-on-action (Schön, 1987) necessary for transformative learning (Hanson, 2013). In addition, the student's own maturity and openness to learning supported her efforts to be critically self-reflective (Taylor, 2008).

Finally, as discovered in the analysis of the student's case her relational agency (Edwards, 2009) is observed by the supervisor and identified as an enabler of her transformative learning.

Within the sub-triangle of SRC the interactions between the subject and the rules are evident in the WIE program rule of allowing for more than one work term with an employer. This gave the student the time needed to gain the respect of her co-workers, and thereby being more effective on the job and leading to transformative learning. The time dimension expressed here reflects the third principle in expansive learning, historicity that recognizes that any activity has a historical context and that history influences the dialectical processes within the system (Engeström, 1987).

In this case, the fact that the student herself had so much history with this organization provided her with different opportunities and responsibilities that might not have been afforded a student with a shorter history. This student was treated as a colleague and peer to her supervisor; she had time to co-create the values of the organization and to gain the respect of her peers. The WIE program allowed the student to return to this workplace over a number of terms, giving her history and experience within this system. This time dimension provided the supervisor with the motivation to invest more energy into the student and, in terms of dialectical materialism, obtained higher use value from the student's contributions for the exchange value of the salary provided (Roth, 2010).

Dynamism also exists within the workplace activity system and is shown in Figure 21 as being most active within the Subject-Object-Tools (SOT), Subject-Rules-Community (SRC) and Subject-Object Community (SOC) sub-triangles.

## Dynamism within Workplace Activity

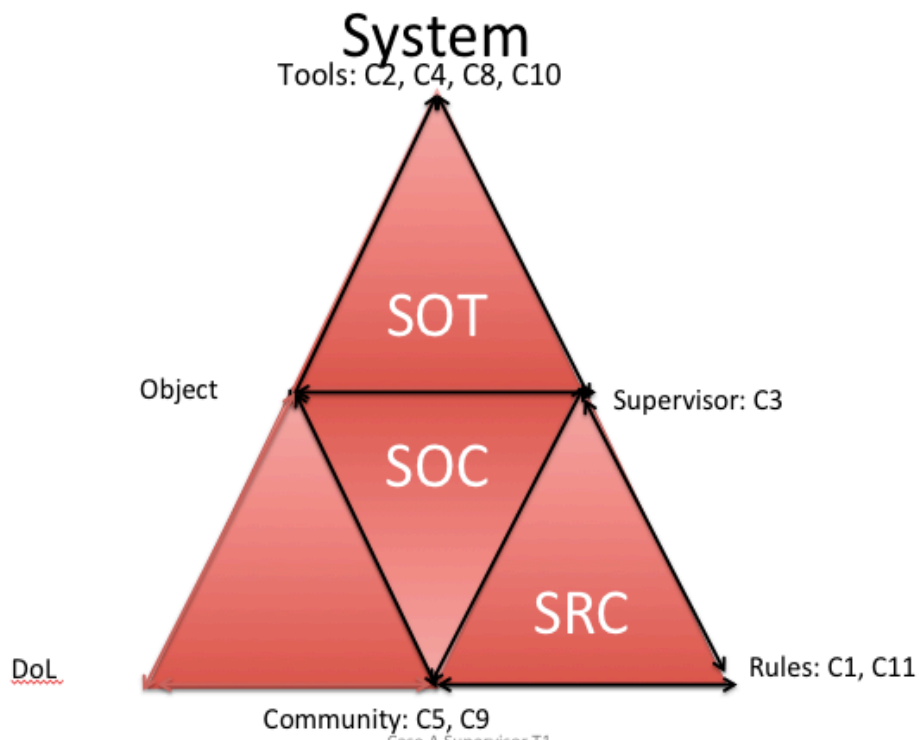


Figure 21. Dynamism Within Workplace System: Case A Supervisor T1

Within the SOT sub-triangle, the supervisor *having confidence in the student* directly interacts with the supervisor's willingness to provide the student with the tools of: *opportunity to use own judgement and experience, working independently, setting of learning goals with competency framework, and opportunity to participate in professional development*. These rich resources have enabled many of the student's transformative learning experiences while she worked by supporting reflection-in-action and expansive learning (Engeström, 1987; Schön, 1987). Within the SRC sub-triangle the rule of allowing the student to have more than one work term with that employer contributed to the employer having the time to develop confidence in the student. The

training on roles and rules interacted with the community component of the system by making evident what was required of the student and her co-workers.

Finally, within the SOC sub-triangle the enablers of *having connections with others in department* and the *opportunity to be exposed to other programs and opportunities* all helped to build the student's workplace community. The deepening appreciation of the workplace community enabled her to be successful in her work and resulted in her transformative learning.

In summary, the internal dynamic within both the WIE program and workplace systems created the tensions and interactions between and among the enablers allowing for critical reflection that resulted in the student's transformative learning. The dynamism within the WIE program system is explicated by analysing the results from the RG which provided explicit elements and constructs, as well as through an analysis of the narrative themes of: range of experiences, learning and skill development, confidence, time, co-creation and autonomy. The narrative themes of range of experiences, learning and skill development, and the student's confidence all added to the understanding gained from the RG of this supervisor's view of the student. The supervisor had a very high level of confidence in the student, and this confidence was not misplaced. The student was autonomous, able to undertake a wide range of experiences, develop and contribute as a peer.

### **Strength of Constructs**

To examine the strength of the relationship of the constructs against the elements, the means and standard deviations were used to map the constructs according to the categories *very useful-consistently*, *useful-consistently*, *less useful-consistently*. As in the



case of the student data, the constructs map onto the systems differently based on strength.

Very useful constructs (mean scores from 1-1.7 and standard deviations less than and equal to 1.0) were opportunities, training and student capabilities and are mapped as:

- Tools: Workplace: *opportunity to use judgement and experience* (C2);
- Rules: Workplace *training on roles and rules* (C1);
- Subject: The workplace supervisor *having confidence in student* (C3); and
- Subject: Student: *student has high level of maturity* (C6) and *ability to gain respect of co-workers* (C7).

Useful and consistent constructs had mean scores from 1.8-2.5 and standard deviations less than and equal to 1.0. These constructs related to reflection and assessment and student capabilities and are mapped as:

- Tools: WIE program and Workplace: *setting of learning goals with competency framework* (C8);
- Tools: Workplace: *working independently* (C4); and
- Subject: Student: *openness to learning* (C12).

Less useful constructs had mean scores above 2.5 and standard deviations less than and equal to 1.0. These constructs grouped as opportunities to learn, time, and relationships with co-workers, they are mapped as:

- Tools: Workplace: *opportunity to participate in professional development* (C10);
- Rules: WIE Program and Workplace: *length of time as an employee—ability to invest* (C11); and

- Community: Workplace: *having connections with others in department (C5) and opportunity to be exposed to other programs/opportunities (C9).*

### Connectivity Between WIE and Workplace Activity Systems

Figure 22 represents the connectivity between the WIE and the Workplace activity systems.

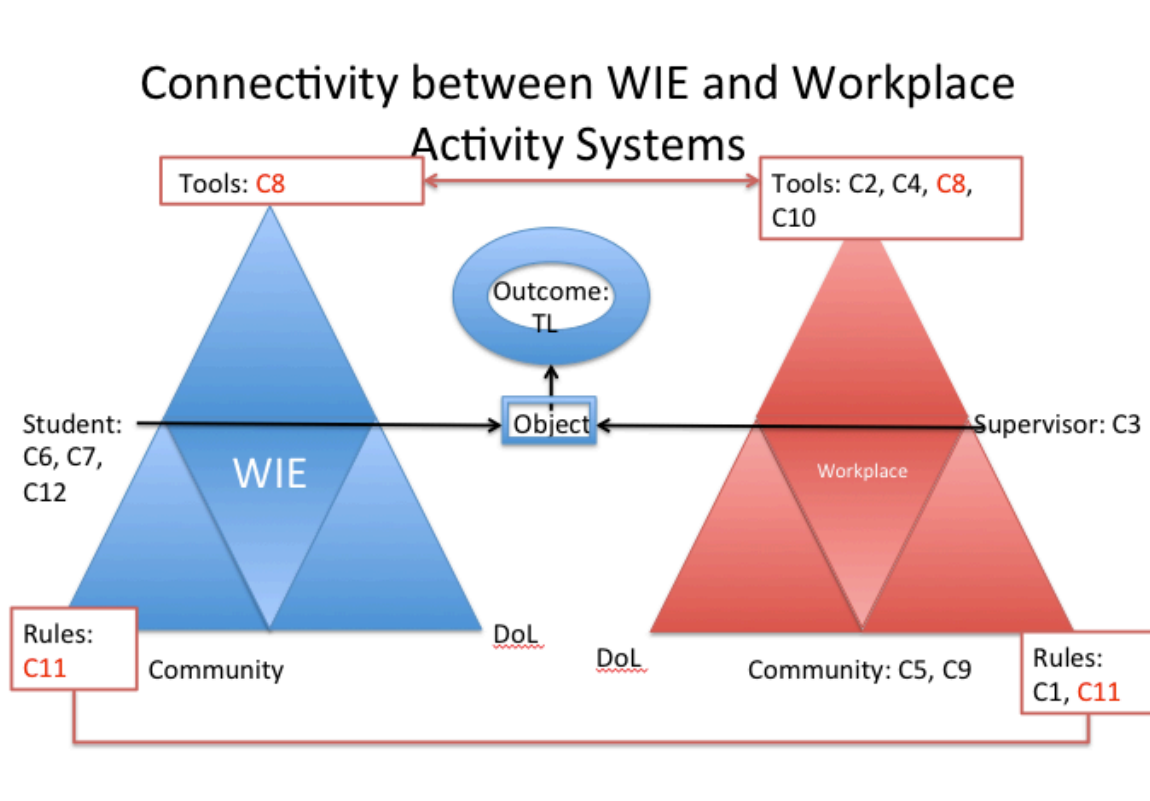


Figure 22. Connectivity Between WIE and Workplace Systems: Case A Supervisor T1

The points of connectivity are with the constructs: *setting of learning goals with competency framework (C8) and length of time as an employee—ability to invest (C11).*

The WIE program requires that student set learning goals and then assess the development of their competency achievement throughout the course of the work term.

This assessment is done with the workplace supervisor and co-ordinator's input. The

competencies being assessed are a set of core general competencies and a set of discipline-specific competencies related to the student's area of study. This process connects the WIE program and workplace and reinforces reflection-on-action as well as reflection-in-action (Schön, 1987) that enabled transformative learning. The second area of connectivity is around the rule of the length of the work term. The conditions determining the length and number of work terms are negotiated between the WIE program and employer workplace. In this case, it was determined that the student could return for several work terms of increasing seniority. This connection between the two systems enabled transformative learning in this case and demonstrates how rules within the WIE program can act as boundary spanning between the two systems.

### **Data Interpretation and Discussion: Supervisor Case A T2**

The additional constructs, C13: *with supervisor, co-creation of values and approach to problem-solving*, C14 *having fresh perspective and recent experience* and C15 *student's high level of professionalism* fit onto the subject: student component of the WIE Activity System. As well, C13 fit onto the subject: supervisor component of the workplace Activity System. These changes are noted in Figure 23 of the two WIE and Workplace Systems.

## WIE and Workplace Activity Systems

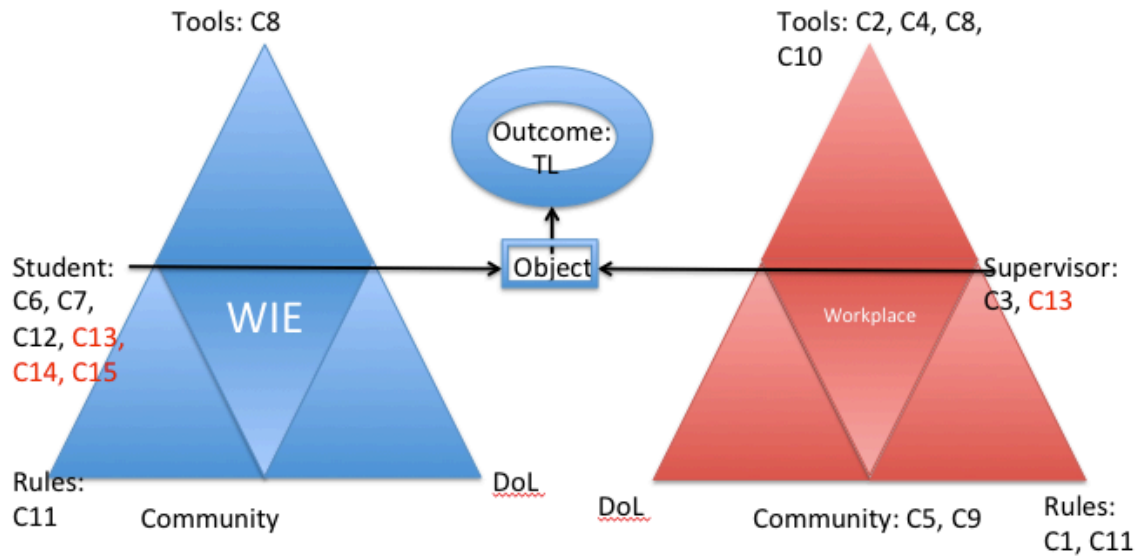


Figure 23. Activity Systems With Construct Mapping: Case A Supervisor T2

### Dynamism in the Activity Systems

In the WIE activity system the additional constructs mapped onto the subject: student and as such intensified the level of dynamism within both the SOT and SRC sub-triangles seen in Figure 24.

## Dynamism within WIE Activity System

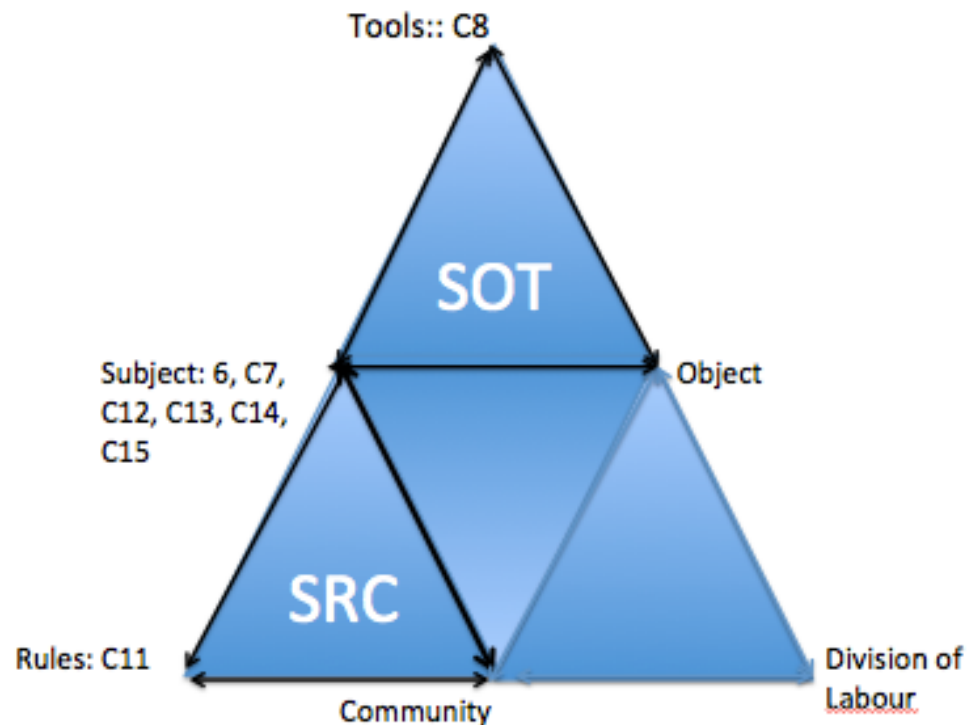


Figure 24. Dynamism Within WIE Program Activity System: Case A Supervisor T2

Regarding the SOT sub-triangle, the student's co-creation of values, approach to problem-solving, fresh perspective and professionalism all bolster the tools she had at her disposal to use in her interactions at work. The normal duration of a WIE work term is four months, however this is not a hard and fast "rule" and as such work terms can be eight, twelve and sometimes sixteen months in duration. This flexibility allowed the student to stay with her employer for longer than four months. This extra four months provided the student with additional time to develop her maturity, build trust with her co-workers, co-create with her supervisor and continue to grow as a young professional, all of which enabled her transformative learning.

The dynamism within the Workplace activity system also intensified with the addition of the construct C13 onto the supervisor component of the system, as seen in Figure 25:

## Dynamism within Workplace Activity

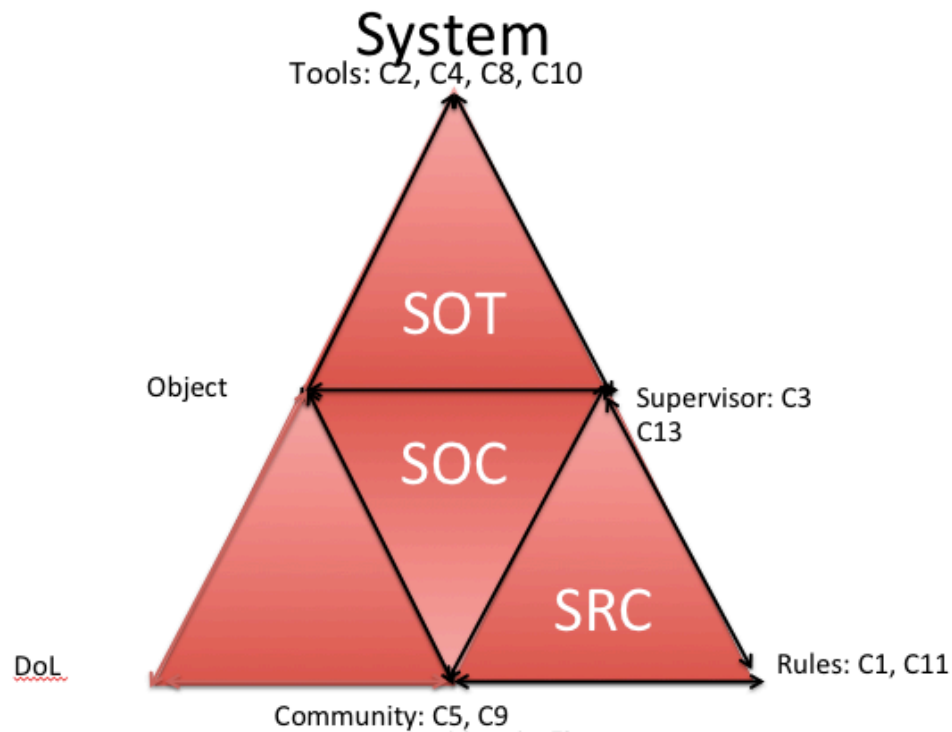


Figure 25. Dynamism Within Workplace Activity System: Case A Supervisor T2

The sub-triangles: SOT, SOC and SRC are all influenced by this additional construct: *with supervisor, co-creation of values and approach to problem-solving*. This co-creation with the student provided the supervisor with even more reason to give this critically reflective student additional opportunities to use her own judgement, to work independently and to participate in professional development, all outcomes that resulted in further co-creation of values and improved work. This co-creation would not have happened without the extended work term time. Finally, the co-creation of values and approaches confirmed for the supervisor the importance of providing the student with

opportunities to be exposed to other programs and developing connections with others in the department. The Kelly RG and the narrative analysis that emphasized the themes of: range of experiences, learning and skill development, confidence, time, co-creation and autonomy explicate both what is enabling transformative learning within each Activity System and how that transformation is occurring.

### **Strength of Constructs**

While the supervisor did not change the ratings given to constructs in TI, the addition of constructs and one element resulted in how the strengths of constructs mapped onto the Activity Systems. For the very useful category, this resulted in the construct *training on roles and rules* being downgraded to useful in T2 and all of the other constructs remaining as in TI. Useful enablers remained the same in T2 with the addition of the training construct and the new construct of *having fresh perspective and recent experience*. There were no changes to the “less useful” strength category. The strength of constructs was examined according to the perspective of the transformative learning experience element summarized in Table 6 based on Fenwick (2000).

Table 6. *Case A Supervisor T2: Transformational Learning Elements*

<p style="text-align: center;"><b>Constructivist</b></p> <ul style="list-style-type: none"> <li>• Working through adversity to find a solution</li> </ul>	<p style="text-align: center;"><b>Critical-cultural</b></p> <ul style="list-style-type: none"> <li>• Having difficult conversations with parents when options all exhausted</li> </ul>
<p style="text-align: center;"><b>Psychoanalytic</b></p> <ul style="list-style-type: none"> <li>• Having courage of convictions</li> <li>• Developing confidence in self</li> </ul>	<p style="text-align: center;"><b><u>Situative</u></b></p> <ul style="list-style-type: none"> <li>• Developing awareness of employers perspective</li> <li>• When enforcing policies communicating consistently and following up even when difficult circumstances</li> <li>• <b>Developing leadership abilities that help earn the respect of peers</b></li> </ul> <p style="text-align: center;"><b><u>Enactivist</u></b></p> <ul style="list-style-type: none"> <li>• Adding own experience to build on training program – put her own stamp on program</li> </ul>

This figure shows the added element of *developing leadership abilities that help earn the respect of peers* in red, and demonstrated a shift in the supervisor’s observations of the student’s transformative learning experiences towards the situative perspective in which the student exhibited relational agency.

Similar to the student results, the constructs were mapped onto the Activity Systems through the lens of the various experiences the student had, whether:



constructivist, critical cultural, psychoanalytical, situative, or enactivist (Fenwick, 2000).

These maps remained the same in T2 as in T1.

For the Constructivist experience the supervisor described the student as: *working through adversity to find a solution*, the constructs that are rated as very useful and useful were:

- Training on roles and rules;
- Opportunity to use own judgement and experiences;
- Having confidence in student;
- Having connections with others in department;
- Student has high level of maturity; and
- Ability to gain respect of co-workers and openness to learning.

For the critical cultural experience the supervisor described the student as: *having to have difficult conversations with parent when options all exhausted*. The constructs that were rated as very useful and useful were:

- Training on roles and rules;
- Opportunity to use own judgement and experiences;
- Having confidence in student, working independently; and
- Student has high level of maturity.

The psychoanalytical experiences the supervisor described for the student were: *having courage of convictions* and *developing confidence in self*. The constructs that were rated as very useful and useful were the same as those for critical cultural with the addition of:

- Training on roles and rules;
- Opportunity to use own judgement and experiences;

- Having confidence in student;
- Working independently;
- Student has high level of maturity;
- Ability to gain respect of co-workers; and
- Length of time as an employee—ability to invest and openness to learning.

Construct mapping was also done onto the situative and enactivist experiences the supervisor described the student as: *developing awareness of employer's perspective, when enforcing policies communicating consistently and following up even when difficult circumstances and adding own experience to build on training program – put her stamp on program.* The constructs that were rated as very useful and useful were:

- Training on roles and rules;
- Opportunity to use own judgement and experiences;
- Having confidence in student, working independently;
- Student has high level of maturity;
- Ability to gain respect of co-workers;
- Setting of learning goals with competency framework; and
- Openness to learning.

In summary, there is a great deal of congruence between the constructs that were rated strongly across all perspectives. The supervisor considered training, opportunity to use judgement, having confidence and the student's maturity as enabling all forms of transformative learning. The constructivist experience was the only one where having connections with others in the department was rated highly, likely due to the team-based problem-solving that was observed. The ability to gain the respect of co-workers was a

strong enabler for all perspectives except the critical-cultural experience, perhaps as this experience involved parents of a child. Length of time in the job was rated as a strong enabler of the psychoanalytical experiences; time being seen as necessary to the development of courage and confidence. The situative and enactivist perspectives were the only ones where the supervisor gave a strong rating to the setting of learning goals and the competency framework, perhaps due to the connection between these goals and competencies and the community of practice and capacity to co-create.

### **Connectivity between WIE and Workplace Activity Systems**

In T2 the connectivity between the two systems becomes stronger with the additional construct C13: *with supervisor, co-creation of values and approach to problem-solving* that attaches to both the WIE and the Workplace systems. The supervisor's articulation of the co-creation of values and approaches to problem-solving is an illustration of knotworking (Engeström, 2009) found in third-generation activity theory. Knotworking involves intense collaboration between subjects from different activity systems around a common object, without a fixed centre of authority or control and results in the co-creation of solutions (Yamazumi, 2009). This poses quite a different approach to engaging students in the workplace. The supervisor attributed this to the return of the student to the workplace and described the connection they had:

We were on the same page a lot this summer. Developing a rhythm and flow that works. Part of that is because it is her second summer, that could be the reason for that.

This connectivity can be seen in the Figure 26:

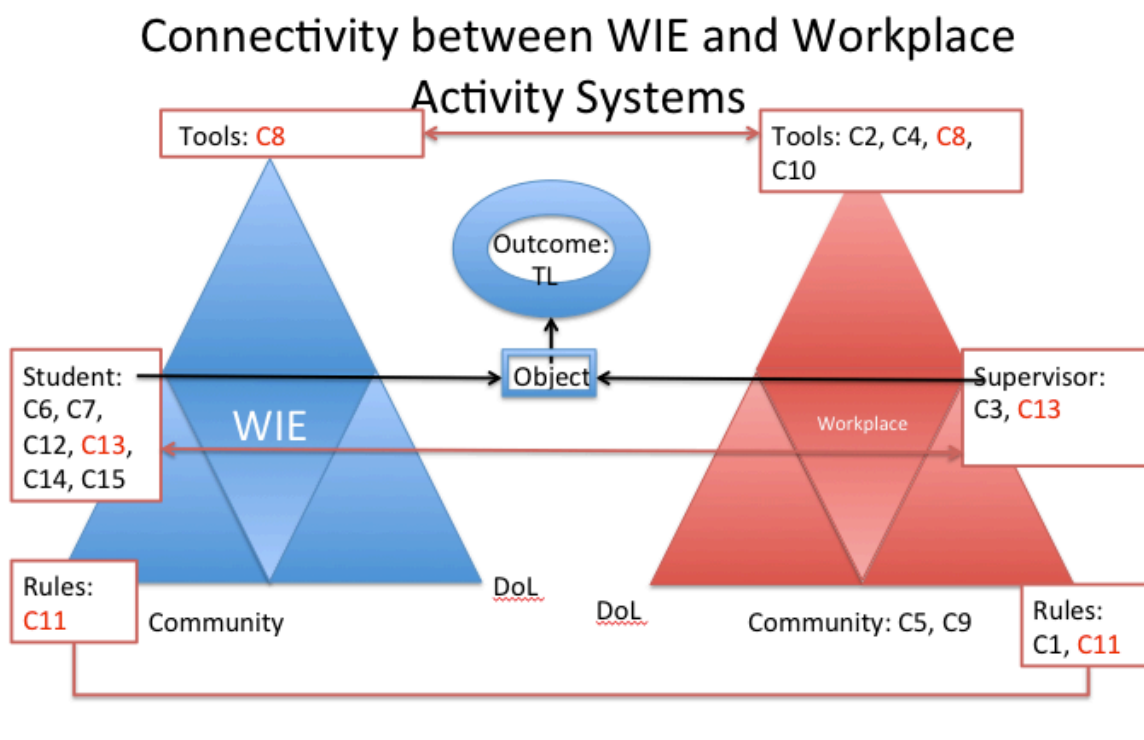


Figure 26. Case A Supervisor T2: Connectivity Between WIE program and Workplace Systems

### Summary of Comparison of Case A Supervisor between T1 and T2

In T2 the supervisor added one element: *developing leadership abilities that help earn the respect of peers* and three new constructs: *with supervisor, co-creation of values and approach to problem-solving, having fresh perspective and recent experience and student's high level of professionalism*. She did not change any of the ratings given previously. The additional element and constructs resulted in the addition of these constructs into the categories of very useful and useful. The change in the internal dynamism of both the WIE and Workplace Activity Systems was intensified with these additional constructs. The mapping of the constructs onto the experience perspective changed for the situative experiences. The connectivity between the WIE and Workplace

Activity systems became more connected with knotworking (Yamazumi, 2009) added to the boundary spanning (Engeström, 2009) found in TI.

In summary, from the supervisor's viewpoint, the student increasingly became a leader of the team during the course of the work term. The dialectical processes within and between the enablers of the two activity systems, and the time allowed for these processes led to the student's transformative learning related to leadership development.

### **Integration**

The final component of the T2 interview was to explore the idea of integration of the transformative learning into the workplace and back into the WIE program. The supervisor commented on how the student's transformational learning benefited the workplace and would likely benefit the student upon return to school. She agreed that the enablers of that learning also enabled the integration back into the workplace and WIE program:

I am sure they have. In terms of X, having the confidence in her, it was obviously implied because I hired her again. Saying to her at the very beginning, "You and I are a team this summer, what can we do to make this more seamless, create more efficiencies, and you are really putting your stamp on it for the second year." This is the first time I have had somebody come back. How can we shape this? We kind of developed our own values and how we wanted the summer to go.

Definitely that. And the high level of professionalism, even more so this summer. She was still their peer, but when she comes to work, they know that they can go to her if they are having trouble. We have an open door policy for our staff. They

knew what was appropriate, what they could go to her with, and what she expected from them as well.

NM: Any thoughts about how they might integrate some of this learning when they go back to their programs?

X has got one year left and she has done all her co-ops. This is her last year of course work, but I think she has that confidence that she could really challenge ideas and be vocal in her class. I don't know how she is in the classroom, but I can definitely see that she won't be quiet in the classroom. She has gained that confidence. This is not just a degree; it is something that she wants to do in her professional career. These classes she has to complete, but I feel that there is more to it with her. She will bring her own fresh ideas from what she has learned in the workforce into her classes.

The supervisor's confidence in the student, respect for her level of maturity and professionalism and value she placed on her contributions created a positive environment for the student. The student was very familiar with the workplace as the WIE program and the workplace had allowed her to participate in several work terms. The WIE program has the requirement of an assessment based on learning outcomes that the supervisor found valuable:

I enjoyed that meeting. [The coordinator] really challenges, not just the student but myself as well. "Are we meeting the framework that we set out? What is it that you want to learn? What is working? What is not working?" I think that is really positive.

As a result of these environmental conditions and institutional requirements, the student was involved in much of the ongoing problem-solving and decision-making in the unit allowing her to engage in the dialectic, mediated processes that resulted in her critical reflection that led both to transformation and integration (Hanson, 2013). This integration is depicted in Figure 27:

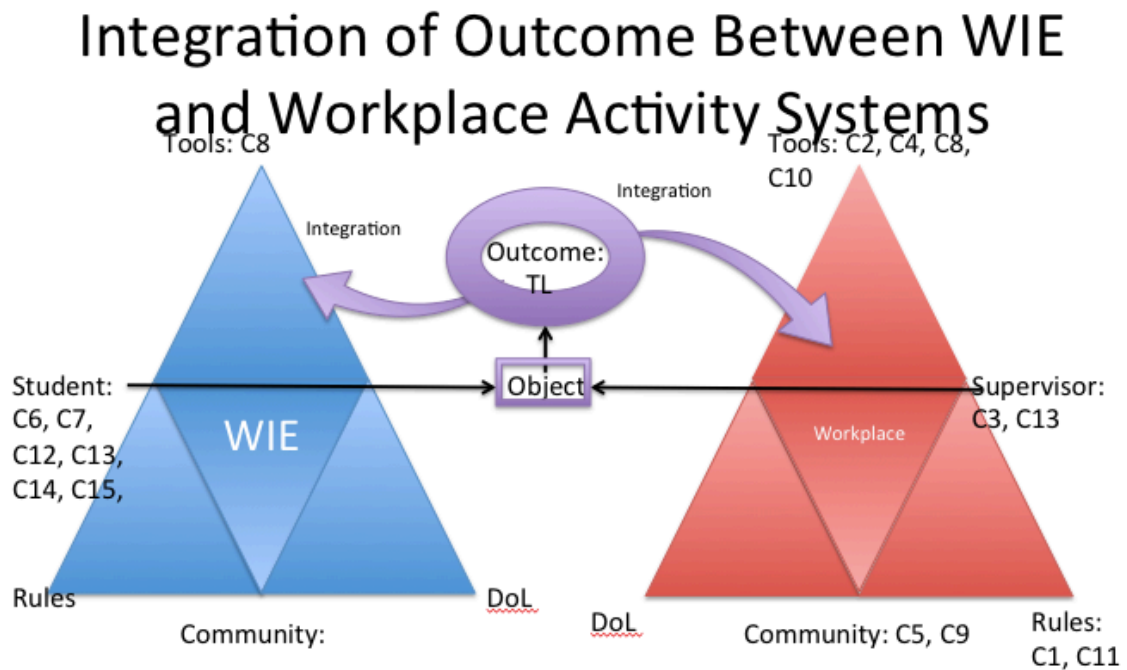


Figure 27: Case A Supervisor Integration of Outcome into WIE and Workplace Systems

### Summary of Findings for Case A: Combined Student and Supervisor

Based on the interview data analysis using the RG, narrative analysis and the interpretation of these data through the theoretical lens of Activity theory, there are some commonalities with the elements identified as being transformative learning moments from both the supervisor and student's perspective. The first theme was that of *working*

*through difficult situations to find a solution.* The second related to the *student developing confidence and the belief in self and her capabilities.* The third theme involved *communicating and building trust and respect with co-workers.* In addition to the common themes, both the student and supervisor identified transformative learning experiences that could be categorized according to constructivist, critical cultural, psychoanalytical, situative or enactivist perspectives (Fenwick, 2000). There was evidence that as the work term progressed additional experiences came from critical cultural, psychoanalytical, situative and enactivist perspectives.

There are seven common themes among the constructs elicited from both the student and supervisor in Case A. The first theme was *adding value*, the supervisor referred to this as the student having the opportunity to use her own judgement and experiences in the workplace, and the student referred to the opportunity to add value on the workplace. The second theme was *mutual respect* in that the supervisor expressed her high confidence in the student and the student identified her respect for the supervisor and strong enablers. *Autonomy* was the third common theme; the supervisor called this “working independently” and the student identified this as “autonomy to express self and values.” The fourth theme was *having the respect of co-workers* and derives from the supervisor’s identification of the student’s ability to gain the respect of her team as well as the student’s identification of her being a trusted co-worker and employee. The co-op program’s *learning goals and competency framework* was the fifth common theme. The sixth theme was *learning opportunities*. The supervisor referred to this theme in the construct where she noted the student’s openness to learning, and the student expressed “learning new theories and techniques” as an enabler. The final common theme was



*networking*. Most of these themes carried similar levels of strength, but there is some variation in how strongly the supervisor or the student viewed the enablers of: mutual respect, autonomy and having the respect of co-workers. These common constructs are mapped on to the WIE and Workplace Activity Systems in Figure 28:

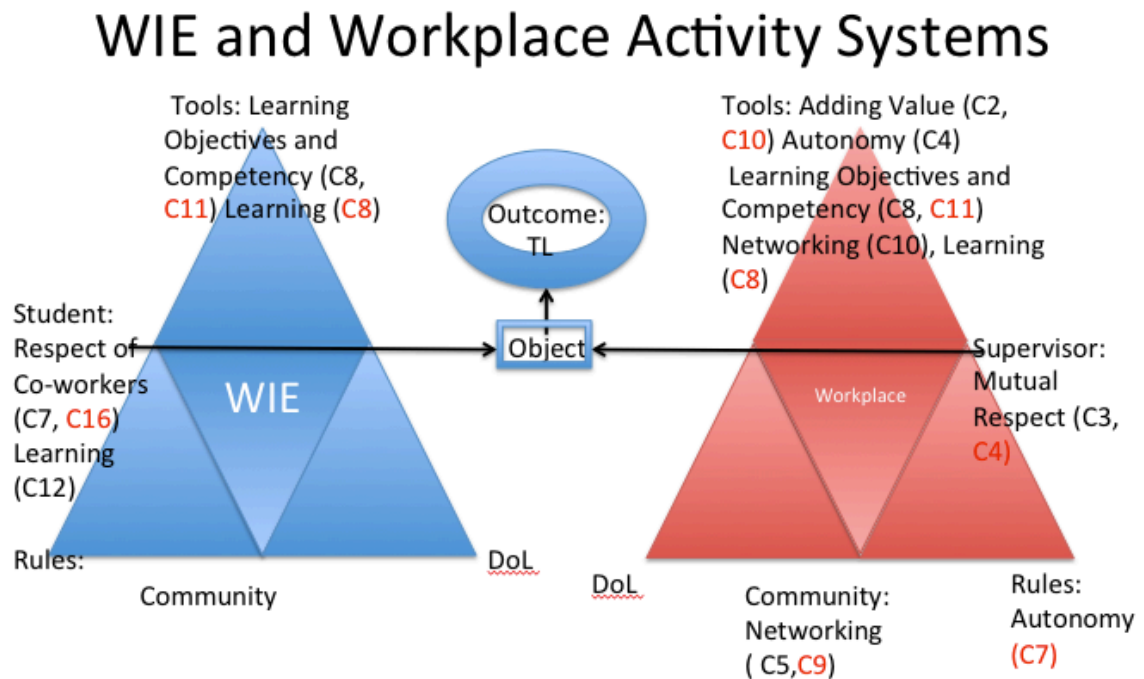


Figure 28. Case A Themed Constructs Mapped Onto Systems

Figure 28 shows how the common constructs mapped onto each system. Figure 29 represents only those constructs that appear in both the WIE and the workplace systems as enablers from *both* the student and the supervisor’s perspective. As this represents more than connectivity between each system as seen in the sections for the student and supervisor separately, this could be called “congruence” or overlapping of the two systems. In Case A, this congruence is around the tools of the learning objective and competency assessment and the learning opportunities that occur in both the WIE and

workplace. What this congruence shows is that both the supervisor and the student share an understanding of this boundary spanning connection that makes for a strong link between the two subjects and their mutual systems. In other words, the setting of learning objectives and the assessment of learning using the competency framework as well as opportunities to learn and apply learning are tools that enable the student to span the boundaries of both the WIE program and the workplace as well as enable the student's transformative learning.

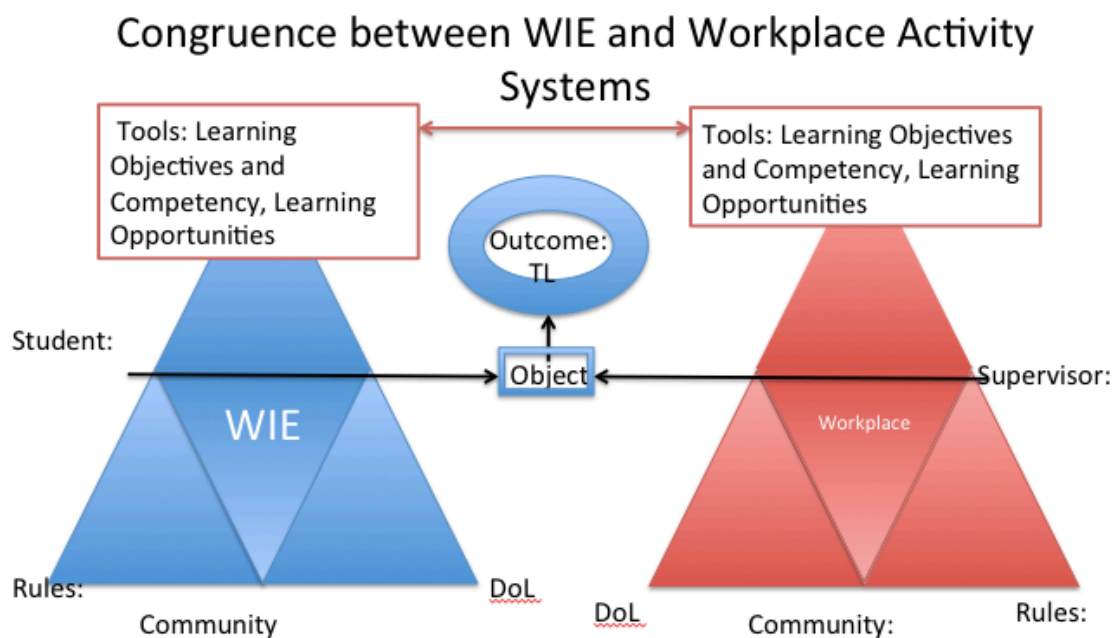


Figure 29. Case A Congruence

The final area of comparison is the manner in which the supervisor and the student viewed the integration of the transformative learning back into the workplace and WIE program. For the supervisor, she saw the workplace having been altered by the student's transformative learning in the area of self-confidence. This self-confidence benefited the workplace through the student's increase in relational agency. She also

thought that this self-confidence would benefit the student's learning when she returned to the WIE program. For the student, the learning gained regarding communication with co-workers, satisfaction in seeing the results gained through empowering others and developing a belief in herself and capabilities were all seen as integrating into the workplace and back into the WIE program for the betterment of both.

In summary, there are many areas of overlap between the student and the supervisor's perceptions both of the types of transformative learning experienced by the student, and the enablers of that learning. These enablers were: *adding value, mutual respect, autonomy, having the respect of co-workers, learning goals and competency framework and learning opportunities*. Interpreting the analysis of this case using activity theory provides a way to understand *how* transformative learning is enabled. The processes of expanded learning, reflection-in-action and reflection-on-action support the systemic and organizational critical self-reflection that led to this student's transformative learning (Engeström, 1987; Mezirow, 1998; Schön, 1987). These dialectical and mediated processes contributed to the student's transformational outcomes of self-formation—her ability to see the “big picture” (Dirkx, 2012) and relational agency—her burgeoning leadership capabilities (Edwards, 2009). The case shed light on the importance of time and a positive emotional environment in supporting the transformative processes and in allowing boundary spanning and knotworking between the two systems (Engeström, 2009; Yamazumi, 2009). Finally, those enablers of her transformative learning were also identified as possibly enabling the integration of the outcomes of this learning for the future benefit of the student, her workplace and her WIE program. This indicates that if her workplace and WIE program provided opportunities to

add value and learn with some measure of autonomy and supported reflexive activity within a respectful environment not only would she learn, she would be better situated to integrate her ability to see the bigger picture and become a leader within those contexts.

### **Case B: Small Private Organization**

#### **Context**

Case B takes place in a clinic located in Victoria, BC that is part of a network of clinics that make up Canada's largest privately owned health-care organization. Nationally there are 140 clinics and approximately 4700 employees. This Victoria clinic, with 45 employees, has three divisions providing occupational therapy services, rehabilitation services and medical services. The unit has been hiring WIE students since 1998 and typically hires four per year who work for eight-month work terms<sup>1</sup>.

The student in Case B had completed two work terms in the Kinesiology program. For this, her third work term, she was returning to the employer for the second half of her eight-month commitment. She had completed three academic years and will be entering her fourth and final year of study when this work term is completed. Her work in the clinic was as a physiotherapy aid, and involved keeping the clinic clean, managing client schedules, preparing equipment for treatment and administering some of the treatments.

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<sup>1</sup> Background provided by manager of unit and supervisor in this case.

## Results from Interviews: Case B Student T1

### Transformative Learning: Elements

To determine that the student fully understood that the focus of this study was transformative learning, she was asked to describe what transformative learning meant to her. She could not provide a clear definition of the term and asked for a description. The interviewer to stimulate a discussion of the term provided a general description.

Transformational learning is really the learning that goes deeper than learning a technique or learning about how to use equipment. Some might call it an “aha” moment. Something really strikes you and you think, “Wow that really changes how I see things.”

The student indicated she understood the term, had just written a work term report and was able to provide seven examples. The first example of transformative learning was labelled realization *about the power of positive interactions with clients* and came about for the student at the beginning of her previous term, at this workplace. Initially she found the duties of preparing materials for therapies and cleaning before and after treatments tedious and resulted in her feeling drained and aggravated at the end of the day. While the work itself was not mentally taxing, it was very demanding as there were a significant number of clients. After interacting with these clients. The student came to realize that for many of them the clinic was an important part of their overall support system and provided more than just a place to be assessed and receive treatments. Their time at the clinic also provided social contact and positive reinforcement. The student described her changed understanding as follows:

Realizing this, kind of shifted my attitude and made me feel a little bit more empowered, knowing that these people were turning to me for help and I could very easily make their life that much easier. I could help relieve them from their pain and help really guide them on their rehabilitation and make their experience as great as possible. I'm not sure what did it, but that switch and it was such an easy switch and it just happened instantly. It brought me a lot of joy as opposed feeling like it was taking things out of me. Instead of feeling like I was getting drained and everything was getting taken out of me, I felt like I was getting energized from being able to provide these things for other people... I just realize that even the small interaction with the clients plays a very large role.

The second transformative learning experience is labelled *realization that I have strong listening skills that are recognized by clients*. The student's experience at the clinic requires a great deal of communication with clients, much of which requires strong listening skills. The student was surprised to note that clients would take the initiative to speak to her about their issues:

People would just come up and start chatting and let me know what was going on in their life, or issues that they were going through, just wanting to get it out there. I was surprised by that, that people felt comfortable enough right off the bat to start sharing these personal things about themselves. It brought me to realize that I'm really good at that, and that plays a huge role in physiotherapy.

Listening to the clients and gaining a more fulsome understanding of their situation helped set the stage for the third element of the *role that psychology and mental state plays in healing*.

The psychological barrier is almost one of the biggest components for people in the rehabilitation. I think personally it is the largest obstacle, aside from the pain, when most often the pain is really driven by a psychological or neurological factor. It was a huge realization to see that that played such a huge role in things.

The fourth element also arose from interacting with clients. Through these interactions and consultations with professional staff at the clinic, the student came to appreciate the many challenges faced by clients in rehabilitation programs. This was especially important for those clients who would be returning to workplaces that they found unfulfilling.

That opened up a whole new perspective for me, thinking that it would be super, super difficult and made me feel a lot more compassionate for people who are going through this, they are so far into their career that they can't necessarily go back to school, whether financial reasons or those opportunities just aren't available.

This element is labelled *development of compassion for clients with challenges*.

The fifth transformative learning example is labelled *personal empowerment that came from realizing how to help others*. In addition to listening to clients, the student also participated in treatment therapies and worked alongside clinicians. These interactions provided the student with many perspectives on treatment and recovery and the

understanding that the road to recovery is complicated by many socio-economic, psychological, and physiological factors. She describes how her transformative learning experience was in becoming aware of the complexity of her work and the role she might play in helping clients:

Making that realization definitely led to me feeling more empowered and being able to help these people and play a small part in their recovery.

The sixth element is labelled *turning around a difficult employee by enabling that employee to make a positive contribution* and came from her first WIE work experience that was a non-clinical setting. The situation that gave rise to the learning was in her role as the supervisor of a difficult employee. She was able to give that employee feedback after a confrontation with another staff member that enabled him to see his role in a different light and take a more proactive, rather than defensive, stance.

I learned how to interact with him without it escalating to the point where he was being defensive. I came up with my own way to empower him so that he felt that he was still in a supervisory role, but also working as part of the team.

The student's final example of transformative learning is labelled: *managed high stress levels to complete a challenging job*. This learning came about as a result of being provided with an opportunity to organize a charity event for her employer. The event posed a big challenge for the student who not only wanted it to be successful but was also concerned that she would not handle the stress well.

It all ran very smoothly, but at the end of the day, which I haven't told anyone this from work, but what I was really concerned about having a meltdown and really



losing my cool. I wanted to carry it through with flare, dignity and not look super uptight. . . . I think about small events that I have organized, birthdays, etc., and my stress level with that, and then compared to such a large event that so many people are involved with and potentially where it could have gone wrong, and I was able to find a lot of balance and happiness in that.

### **Transformative Learning: Constructs**

The student identified sixteen constructs through the course of the interview. The first of these is *high levels of self-awareness*, an important pre-condition that enabled the student to realize she needed to approach her work in a different way to avoid being emotionally drained.

I quickly had to realize that I couldn't keep going like this and would have to make some sort of switch. I don't know what I did, or when I realized it, but I kind of decided that I don't want to feel so drained all the time, so I will have to look at this in a different way.

In addition to self-awareness, the student asked for the advice of experienced co-workers to help her manage the stresses of her work:

Co-workers, yes. People had described other challenging or difficult scenarios. Having that forewarning had given me a little bit of comfort. Say a difficult client at the pool and how that situation was resolved, kind of having that sort of information has definitely been helpful.

This construct is labelled: *experienced co-workers*.

The third construct, *opportunities to interact with clients*, is identified as an enabler as the student was working in an environment that encouraged her to interact with clients. Having these plentiful opportunities allowed for many learning moments, including transformative learning.

The nice thing about the clinic is that I have a ton of freedom to really interact and spend time with whoever I want.

The student described the culture of the organization as being another enabler. As a health care clinic that provides rehabilitation, occupational therapy and medical services there are a number of different health care specialists with expertise in various aspects of the clients' care. As such the approach is holistic and considers both the physical needs of clients as well as their need for education and support. As a result, there was a strong ethic around communication that is educative and helpful, both for the clients and others.

Holistic, team-based, a lot of communication. They even encourage that kind of interaction where, if someone needs something or they need to talk, they would never stop you from taking the time to sit down and have a conversation with them. Giving them help or education or anything that they may need. . . . It is a very communicative environment.

This fourth construct is called: *values and culture of workplace for holistic customer service*.

The fifth enabler related to the aspect of communication in the workplace. The student was able to observe how staff communicated with clients and was then able to model her behaviour accordingly:

Having conversations with people about whatever they need to talk about hasn't really been said, but it is extremely common practice. Everyone is doing this all the time, whether it be the occupational therapists, the kinesiologists, the physiotherapists. Everyone is always talking to someone about something.

This construct is called: *role models at workplace*.

The sixth construct, *opportunity to attend pro-d training at clinic* also related to the culture of the organization that values ongoing education and learning. There is a monthly lecture series for all staff that the WIE students are welcome to attend.

They actually let me sit in on that. It is for an hour. A different person from a different field from within the clinic will sign up to do one of these lectures.

Everyone comes in; anyone that is an employee of the clinic is welcomed to sit in on it. They will do lecture slides, hand out some sort of handout or do some sort of activity.

Having meaningful interactions with the health care professional staff was identified as the seventh construct labelled: *able to observe professionals at work*. The student described how this enabled her to gain a greater understanding of the psychological dimension to recovery.

Working with the occupational therapist. I was able to sit in on one of her assessments where someone had been referred to one of our programs. One of the first steps is to speak with an occupational therapist, who essentially goes through their lifestyle, their education background, their home life, their support system,

and then moves onto their job demands. That really brings out a lot of personal information about their psychological status.

In addition to the being able to attend professional development lectures, the student has access to educational resources, both in terms of reading materials and informed staff, at the workplace. She regularly avails herself of these resources and considered them as having enabled her transformative learning.

They have pain education books that they give to clients. I basically just try and open a book when I sit down to have lunch and just start flipping through it. Also education is a very big component of their pain management program.

Overhearing physiotherapists and how they educate their own clients, and how they try and present that to people has given me some insight as well.

This eight construct is labelled: *access to resources at workplace*.

In describing the ninth construct: *opportunity for hands-on learning* the student commented on how having opportunities to do hands-on learning, both as a result of the WIE program and one of her courses, enabled her to have transformative learning experiences:

You see that is why I really like this job, was I really thrive on the hands-on atmosphere. . . . For me, if I do something hands-on I remember it so much better than just reading about it. I find that I can learn so much more because it is ingrained in experience, there is more of an emotional component and a bit more attachment to that and a larger sense of pride and accomplishment that goes along

with actually doing something as opposed to just reading about it, or just writing about it, or explaining it. That is what I really like.

The tenth construct opportunity *to sit in on initial assessment* enabled the student to have transformative learning that led to the development of her level of compassion. She was given access to clients at the beginning of their recovery, allowing her to gain a more fulsome understanding of the client's circumstances. Access to the initial assessment set the stage for her understanding and the development of her compassion.

I guess being able to sit in on assessments and really hearing. You don't really know. You see these people join the program and they are so vulnerable, you don't necessarily know what is going on in their life, or their background... Does this person have a support system, and will that lack of support system potentially be a barrier and how can we help them with that, or can we provide them with counselling services. I guess that really opened my eyes. That is when I realized that a lot of these people have nobody.

In referencing the transformative learning she had experienced in dealing with a difficult employee, the student identified several enablers. The first enabler was being given the authority to decide what to do about this employee and act accordingly. She described what her managers had said to her that demonstrated this:

You need to own your position, you need to be a manager, but just be able to back up what you are doing and have a reason for what you are doing and be reasonable and represent the restaurant the way we do, but you do have the power to do this.

This eleventh construct is labelled *provided power and authority to do job requirements*. Being given this authority provided the student with a sense of empowerment that enabled her to deal with the situation in a proactive and successful manner. This included passing on that feeling of empowerment to the employee who then turned his attitude around:

I guess, just having that freedom and ability kind of gave me the confidence to share that with him, so he could also feel that way, he could also feel empowered.

This twelfth construct is labelled *personally empowered*.

In dealing with this situation the student benefitted from the mentorship provided to her by her co-workers. Already identified in relation to co-workers was how they were role models and that she was able to observe them at work. In addition, these co-workers actively mentored the student in her dealings with clients. Going beyond allowing her to observe them at work, they provided her with guidance, coaching and encouragement.

This led to the thirteenth construct, called *mentorship from others*.

I guess probably mentorship from other managers who had dealt with similar situations a lot, or as well as the same person a lot.

The fourteenth construct *opportunity to delegate* was derived from the transformative learning example of the charity event. The student was encouraged to delegate some of the responsibilities for this event by a co-worker, who also provided suggestions on how to delegate properly. In doing so, she found she was able to accomplish the task and handle her stress more effectively.

At the end a ton of people pulled together with getting all the equipment, doing the setup/take down, people were really helpful. In terms of the planning it was mostly myself. But the same individual was really good with giving me advice about delegating. “You have to delegate. You have to handout some of these tasks to other people. You don’t have to do this all on your own.”

The fifteenth construct echoed some previously stated enablers and is labelled *support and willingness to educate from co-workers*. The student described how co-workers were always willing to answer questions and make them selves available to help her. This culture of helpfulness enabled her transformative learning:

I found in a lot of jobs that I have had, especially in jobs with a high rate of turnover, that a lot of people have been there for a long time, they can get quite aggravated at teaching and re-teaching the same thing over and over again. But I have never been made to feel that I’m inconveniencing anyone, or I have never had anything but complete willingness showed to me for every single aspect of learning that I have done in the workplace. No matter what it be, there is always someone that will support me and that will help me in any aspect of anything that I could possibly do at the job. That is one thing that has probably facilitated the most learning, the tremendous amount of support and willingness to educate.

Finally, the sixteenth construct *strong team approach* was another component of the organizational culture that the student said enabled her transformative learning:

I think they are really good at the team atmosphere. It is a very multi-dimensional approach to rehabilitation. That is one of their visions. All the programs are team

based. I think that everyone has that teamwork kind of attitude. People are really willing to work and collaborate with you, whether that be teaching you, or guiding you, or helping you.

### Repertory Grid Results

Figure 30 indicates how the student rated each enabler of transformative learning (the construct) against each identified transformative learning example (the element).



Figure 30. Repertory Grid Results: Case B Student T1

Table 7 displays the statistical results from this rating of the constructs against the elements.

Table 7. Case B Student T1 Mean and Standard Deviation of Constructs

	Standard Deviation= </=1	Standard Deviation=>1
Mean = 1 to 1.7	Very Useful Enabler—  Consistently	Very Useful Enabler—Not  as Consistent



	<p>C1. High levels of self-awareness</p> <p>C4. Values and culture of workplace for holistic customer service</p> <p>C5. Role models at workplace</p> <p>C7. Able to observe professionals at work</p> <p>C9. Opportunity for hands-on learning</p> <p>C12. Personally empowered</p> <p>C15. Support and willingness to educate from co-workers</p>	<p>C3. Opportunities to interact with clients</p>
<p><b>Mean = 1.8 to 2.5</b></p>	<p><b>Useful Enabler—Consistently</b></p> <p>C11. Provided power and authority to do job requirements</p> <p>C13. Mentorship from others</p>	<p><b>Useful Enabler—Not as Consistent</b></p> <p>C2. Experienced co-workers</p> <p>C6. Opportunity to attend pro-d training at clinic</p> <p>C10. Opportunity to sit in on initial assessment</p> <p>C16. Strong team approach</p>
<p><b>Mean= 2.6 to 5.0</b></p>	<p><b>Less Useful Enabler—Consistently</b></p> <p>N/A</p>	<p><b>Less Useful Enabler—Not as Consistent</b></p> <p>C8. Access to resources at workplace</p>

		C14. Opportunity to delegate
	<b>Standard Deviation= &lt;/=1</b>	<b>Standard Deviation=&gt;1</b>

## Case B Student T2

### Transformative Learning: Elements

When interviewed at the end of the work term, the student was asked whether or not she had experienced any additional transformative learning that might be categorized differently than what she had articulated in T1. After having the list of elements read out to her, she did not have any further elements to add.

NM: Is there anything you want to add to that list at this point?

I don't think so. I think those are still very very applicable.

NM: And encompass anything you would have experienced this semester?

Yes, definitely, yes.

Given that there were no changes to the examples of transformative learning, the chart of the categorization of experiences as found at T1 remains the same.

### Transformative Learning: Constructs

Similarly, when asked about making any additions to the listing of constructs described at T1 the student had nothing further to add.

Yes, I think they are still really relevant.

NM: Do they still make sense to you?

Yes.

NM: Is there anything you want to change or add?

No. No. I think those all sound really still relevant in the day to day.

The student was asked to review the rankings she gave to the constructs against the elements and she had no changes to her previous rankings.

I think because I answered them really according to my initial instinct, I feel that they are still very relevant. I think it is good.

As the student had no changes to make to the elements, constructs or rankings, the statistical results from T1 remained for T2.

Figure 31 shows the results of the exploration of the relationship between the elements and constructs.

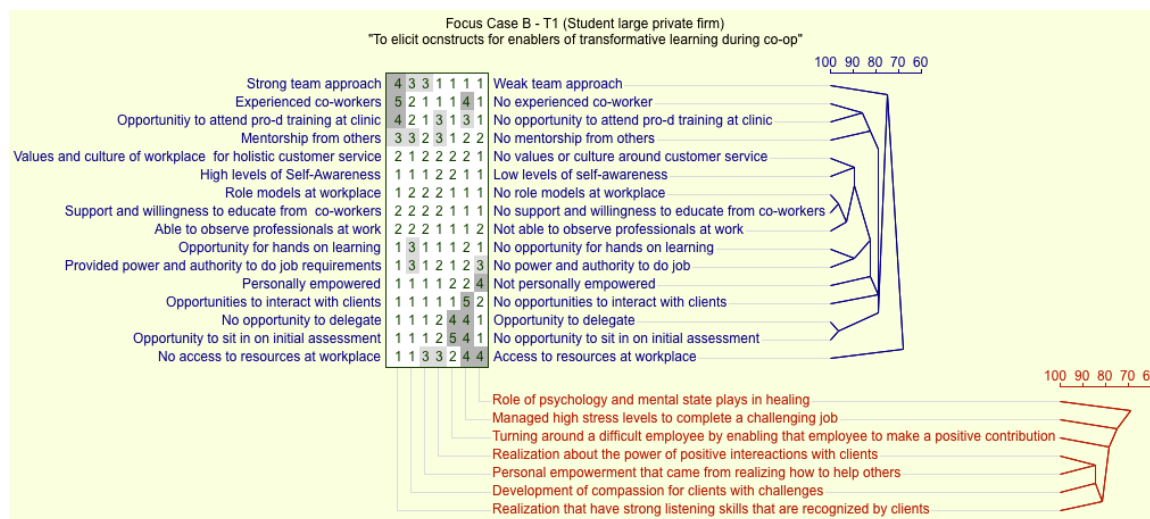


Figure 31. RG Results for Case B at T1 and T2

The student was asked to explain the close matches, or relationships, between the elements and constructs to determine if the very similar elements or constructs should be reconfigured as a singular element or construct rather than several. The following elements were identified as similar:

Realization about the power of positive interactions with clients, personal empowerment that came from realizing how to help others, development of compassion for clients with challenges, and realization that have strong listening skills that are recognized by clients.

The student explained why these elements aligned and why they should still be considered separate and distinct transformative learning experiences:

Well because they are very closely related between myself and the client it seems like. It is very care-related I think.

NM: By care-related, they are all kind of examples relating too?

Compassion, how to help others, and positive interactions to me, seems all within the field of caring for another person.

NM: So it makes sense that they are matching up?

Yes.

NM: Do you feel that they should still be separate or could be combined? As long as they seem like separate transformative learning?

With the power of positive interactions with clients, in my mind when I initially said that I was thinking of the impact that it had on the client itself. How the position interactions set up their rehab, their day, and their motivation. But when I look at it again, I could also look at it in a way that the power could be how it helped me develop compassion. In that sense it could be looked at in two ways. Initially, I had mentioned it to be more aimed; it is giving the client power as opposed to giving me compassion. That kind of thing.

NM: So separated out?

I think it makes sense that it is separate.

Several similarities with the student's constructs were explored during this T2 interview. The elements that were very similar were *role models at workplace*, *support and willingness to educate from co-workers* and *opportunity to observe professionals at work*, which the student reiterated should be considered separately.

I do. Again, I can see how people who are supportive, I admire that. That is what makes a role model for myself, but there is a whole bunch more reasons why I find these people to be such great role models, it is not just their support. It is the way that a lot of them practice, their personalities, those kinds of things as well.

NM: It goes beyond that piece?

Yes. That support and willingness could technically fit into that, but I think there is a whole other spectrum of qualities that really make me look up to these people. I would still separate them. There are a lot of people that give me support in the clinic that aren't necessarily my role models. I think of the physiotherapists as

more of my role models, because that is really what I want to be. But I also get a lot of support from our office administrator, other kinesiologists, and things like that.

NM: Perfect. You will see that those guys are closely linked to this one: “able to observe professionals at work.”

That does play into the education, as I’m learning from seeing. The education that I’m getting from my co-workers, I guess they are closely related, but I think that observing the professional atmosphere in the clinic has a lot more to do with professional behaviour, where the support and education that I’m seeking out has a lot more to do with physiotherapy and treating individuals as opposed to just acting with a professional demeanour.

NM: Professionalism and what that means in that context?

Yes.

The second grouping of constructs that seemed closely matched included *opportunity to delegate* and *opportunity to sit in on initial assessment*. The student explained why they were closely matched, yet still quite distinct:

My initial instinct would be that I had to go and ask. No one was necessarily offering it to me. You know how I mentioned that a lot of the special projects and tasks you can take on in the clinic are kind of self-regulated, self-paced and you seek them out yourself. The only thing that I would see as those two being related,

I had to seek out to do those initial assessments and if I am delegating, I'm the one who is making that decision for myself to be doing that.

NM: They are self-initiated, self-directed?

Yes. That is what would be my guess as to why they are closely related.

The student described how the constructs of *values and culture of workplace for holistic customer service* and *high levels of self-awareness* were aligned, yet different:

I think that I recognize myself as being someone who represents the companies values very well. I really do. I speak to the clients a lot about the team approach and how beneficial that can be. I do have a lot of confidence in myself that I represent that as well. That is what I would assume is sort of the same thing. Most of the people who work at the clinic are also very self-aware and confident and understand action/reaction, sort of thing, and what sort of impact they are having on the clients. I think that I have assimilated with that sort of mission as well.

NM: Having that high level of self-awareness, in a way you are taking on the values and culture of the workplace?

I think so. Self-awareness to me, means being aware of what impact your interactions are having with other people, how your emotional well being is, how other people are reacting to you and how you are reacting to others and understanding that. I think that I understand about myself that I have very similar values that the company does.”

Finally, the student found the alignment of *opportunity for hands-on learning* and *provided power and authority to do job requirements* to make sense to her and did not require consolidating into one construct.

### **Narrative Analysis: T1**

A further analysis of the narrative transcript was conducted to determine latent themes that could not be revealed through the RG. Six latent themes emerged as a result of this analysis being *self-directed, the power of emotions, healing is more than exercise, the importance of team, communication, and learning*. The theme of *being self-directed* was expressed by the student in a number of ways: “working independently,” several references to being “self-paced,” managing her own schedule, doing independent research and reading. She summed up this theme in the following statement: “It was up to me to put everything together.”

The theme of *emotions, and the power of emotions*, came up in several ways throughout the interview. The first example was in the student’s description of a change in her own attitude that came about as she developed compassion for her client’s circumstances.

I’m not sure what spurred it, but I had changed attitude when I realized that I just had to realize that these people were in a position where they needed a lot of help and they needed things that they couldn’t get on their own. I actually had the power and the resources to help them with these things and to make their day a lot easier.



I'm not sure what did it, but that switch and it was such an easy switch and it just happened instantly. It brought me a lot of joy as opposed feeling like it was taking things out of me. Instead of feeling like I was getting drained and everything was getting taken out of me, I felt like I was getting energized from being able to provide these things for other people.

It made me feel really good about myself.

Not only did this shift towards a more positive attitude result in the student becoming more energized and productive, but it also allowed her to see how a shift in attitude within a client affected their recovery:

It is very recognizable the people in the program who have switched their attitude as well. You can see their recovery skyrocket because they have been able to free themselves of that burden that they have been carrying for so long.

The second example of the power of emotions related to the ways in which the student found to manage a stressful task and, in so doing, reinforced a feeling of pride and accomplishment that led to a general state of happiness.

I wanted to carry it through with flare, dignity and not look super uptight.

I was able to find a lot of balance and happiness in that.

The third theme, *healing is more than exercise*, emerged as the student described a number of socio-economic and psychological dimensions to healing that expanded her appreciation for the multitude of factors leading to recovery. These additional factors included social isolation, psychological and emotional states such as fear and anxiety.

The student expressed her realization that some clients resist rehabilitation as that would result in a return to a work situation that was unwanted. This broadened understanding is summarized in the following passage.

Speaking with this occupational therapist helped me realize that a lot of people are not very well educated when they come into this or do not enjoy their job, or are not given the time, money or resources to go back to school or to have those other opportunities. . . . I never really thought about that, about how it would be going through rehab to get back to a place that you couldn't stand.

Case B took place in a workplace that was committed to team-based work, and this was evident in the student's descriptions of being included in team meetings, client consultations, and the general availability of members of the team to mentor and provide advice and support:

I think they are really good at the team atmosphere. It is very multi-dimensional approach to rehabilitation. That is one of their visions. All the programs are team-based. I think that everyone has that team work kind of attitude.

Within this team approach there was a great deal of communication among team members and with clients. The student described this communication.

They even encourage that kind of interaction where, if someone needs something or they need to talk, they would never stop you from taking the time to sit down and have a conversation with them. Giving them help or education or anything that they may need.

While communicating helpful and educative advice was crucial to caring for clients, the student also identified the importance of listening:

But just being someone to listen and kind of reflect what people are thinking. I was really struck that people need so badly to get these feelings and thoughts off their chest and they don't necessarily have anyone to do that with. . . . A lot of times it can dwell in them for so long and I think it really holds them back in their rehabilitation until they are able to let that go and set the stage for moving forward.

People would just come up and start chatting and let me know what was going on in their life,

I'm really good at that, and that plays a huge role in physiotherapy.

The final latent theme is that of learning. The student talked about taking ownership of her learning by being self-directed. She also identified that hands-on learning was her preferred learning style, and had an emotional dimension, as previously stated.

Finally, the student described how she had benefitted from the willingness of others to educate, a critical ingredient to being a successful professional in this field:

I think what I am learning is that physiotherapists really do enjoy sharing information with other people and that is probably why they are so good at their job, because education is pretty key in the success rate of their clients. That is one thing that has probably facilitated the most learning, the tremendous amount of support and willingness to educate.

## **Narrative Analysis: T2**

During the T2 interview, the student's narrative themes were reinforced with additional examples. Being self-directed in T2 included undertaking special projects such as an inventory list" and a training manual for future students. She described these experiences as coming from her own initiative within an organizational context where:

They are giving you the power to do things, that you know needs to get done.

The power of emotions theme in T2 included a further element of self-awareness and awareness of the emotional state of others:

Self-awareness to me, means being aware of what impact your interactions are having with other people, how your emotional well being is, how other people are reacting to you and how you are reacting to others and understanding that. I think that I understand about myself.

The student linked her emotional state to her learning in T2, adding to both of these latent themes:

When I'm confident about my abilities and confident about my priorities and my ability to study, learn and retain knowledge, the results are much better, than if I am in a negative space, have a negative attitude or not looking at the attaining the knowledge for the right reasons.

The team motif continued in T2 with a clear description of co-configuration (Engeström, 2009) in a team that included herself, the professional staff and the client—all working towards a recovery plan:

I'm directly part of their team. I am working with their kinesiologist and their physiotherapist. I also get to see what exercises they are working on, and talk to their kinesiologist about, or physiotherapist.

Considering the team, the student strengthened her definition of a role model going beyond an individual being a supportive team member:

I can see how people who are supportive, I admire that. That is what makes a role model for myself, but there is a whole bunch more reasons why I find these people to be such great role models, it is not just their support. It is the way that a lot of them practice, their personalities, those kinds of things as well.

She also expanded her definition of team to include professors, and what made them role models:

I have some very experienced professors, who are also really willing to mentor the students in as many ways as they can. That plays into role models.

In T2 the theme of communication included descriptors of additional communication skills, and confidence in communication, the student had gained:

I'm confident that if I talk to a client, I have the communication skills now to help someone if they are having a panic attack and I am comfortable talking to their team about that and relaying the message and making sure they are getting the right level of support.

The student's depiction of learning in T2 included a different, longer-term perspective on learning as part of ongoing professional development and as a lifelong pursuit, not strictly in the instrumental sense of gaining a credential:

When I have seen how passionate all the physiotherapists are about their current knowledge and also about expanding on that, and how excited they get. They are constantly doing courses, they are constantly attending and holding lectures, doing other levels of certification, trying out new techniques, trying techniques on themselves and they are really passionate about that. I also look at how passionate they are about passing on that knowledge to myself, to clients, to the program participants. I'm going back with a new perspective. I am going back getting excited about advancing my own knowledge and creating more of a skill set as opposed to just getting a certificate, or getting a level.

### **Data Interpretation and Discussion: Student Case B T1 and T2**

The data gathered through the repertory grid and as a result of the narrative analysis were interpreted using activity theory. As this Case B student did not change any elements, constructs or ratings in T2, the interpretation of results therefore covers the entire time period of the study. The student's constructs mapped onto the areas of the triangles shown in Figure 32 as follows:

1. Tools (the means by which the activity takes place): From the WIE program and workplace, *opportunity for hands-on learning (C9)*. From the workplace: *opportunities to interact with clients (C3), opportunity to attend pro-d training at clinic (C6), able to observe professionals at work (C7) access to resources at workplace (C8), opportunity to sit in on initial assessment (C10)*;
2. Subject (Student): From the WIE program: *the student having a high level of self-awareness (C1) and being personally empowered (C12)*;

3. Rules (the cultural norms, standards, guidelines): From the workplace: *values and culture of holistic customer service* (C4);
4. Community (socio-cultural environment in which the activity takes place): From the workplace: *experienced co-workers* (C2), *role models at workplace* (C5), *able to observe professionals at work* (C7), *mentorship from others* (C13), *support and willingness to educate from co-workers* (C15); and
5. Division of Labour (who does what): From the workplace, *provided power and authority to do job requirements* (C11), *opportunity to delegate* (C14), *strong team approach* (C16).

## WIE and Workplace Activity Systems

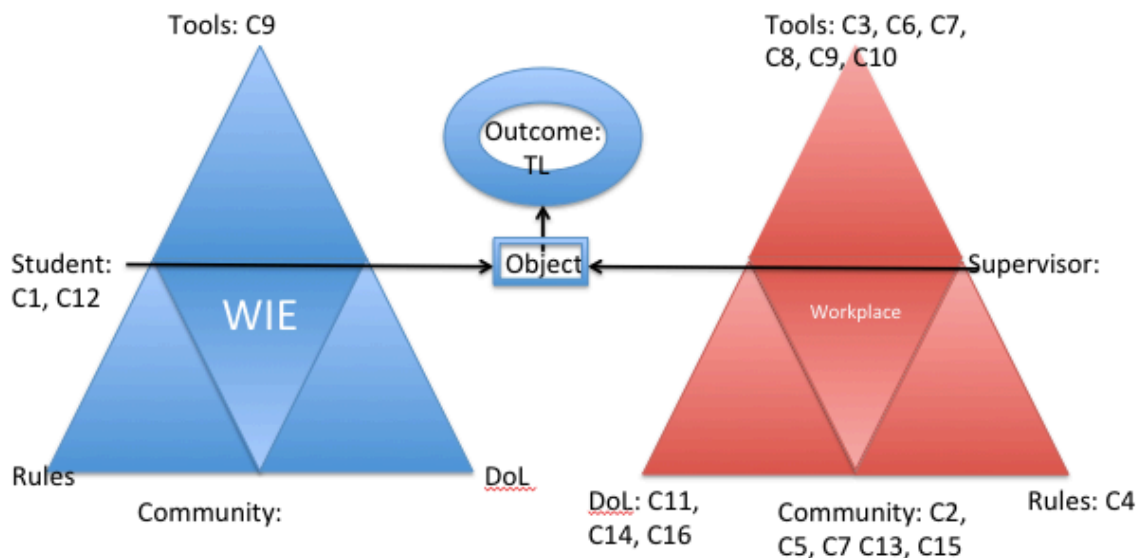


Figure 32. Case B Student T1 Activity Systems With Construct Mapping

## Dynamic Nature of Activity Systems

As stated previously, activity theory has us consider the interactions between and among the mediators—in this case the enablers of transformative learning—to understand how expansive transformation occurs (Roth & Lee, 2007). In the case of Case B student T1 and her WIE system, these relationships show up most strongly between the Subject (student)-Object-Tools (SOT) section of the activity triangle as shown in Figure 33.

## Dynamism within WIE Activity System

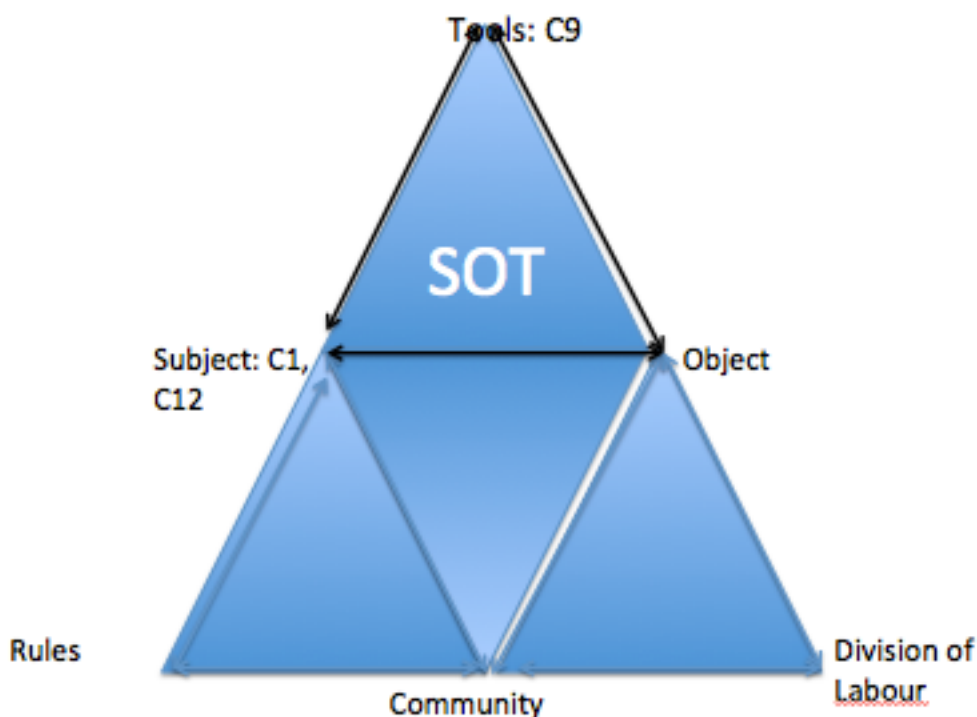


Figure 33. Case B Student T1 Dynamism Within WIE Activity System

Being in a *hands-on learning* program affords her the opportunity to engage with the object that is the work she is to do during her work term. Her *self-awareness* and being *personally empowered* have enabled her to tackle this work in such a way that she has had both the opportunity and personal capability to do the critical reflection required for transformative learning. As she so clearly expressed in the quote featured on page



141, the connection between hands-on learning and her sense of accomplishment, self-awareness and empowerment and the positive emotions this creates and recreates for her (Roth, 2009):

Considering her workplace activity triangle, the dynamic relationship between the Subject (supervisor)-Object-Tools (SOT) section becomes evident, as seen in Figure 34.

## Dynamism within Workplace Activity

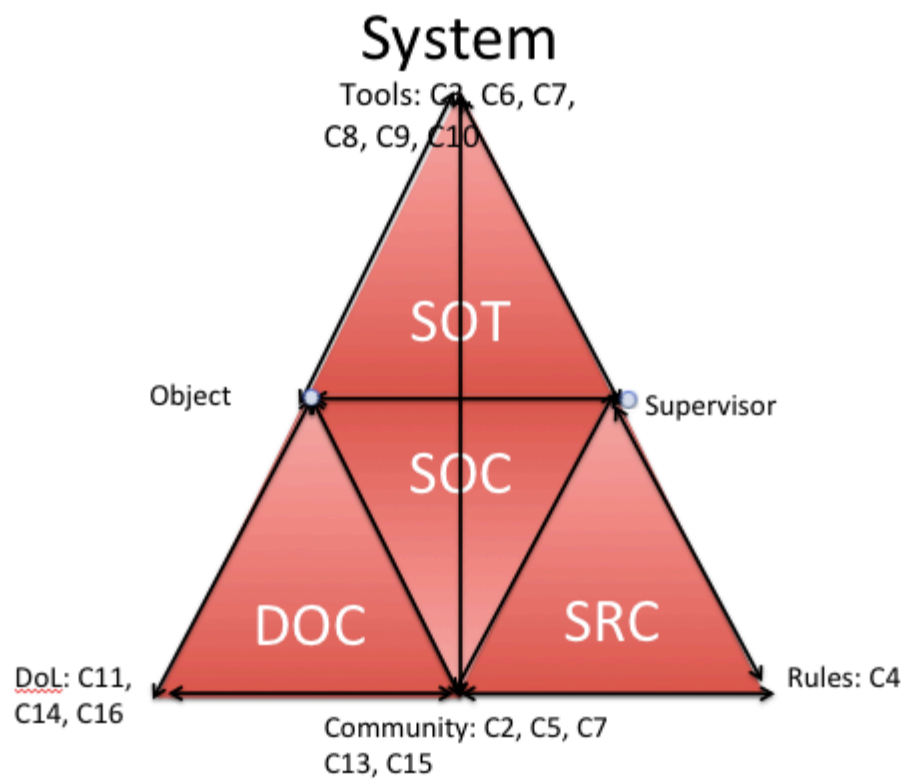


Figure 34: Case B Student T1: Dynamism Within Workplace Activity System

The tools afforded her by her supervisor at the workplace have allowed her to have the resources to tackle the object and have enabled her to realize the outcome of transformative learning. Being in a hands-on learning program and in a workplace that encourages her ongoing hands-on learning, having opportunities to interact with clients, to sit in on the initial client assessments, to participate in professional development and

access the organizations resources have all contributed to the object and subsequent outcome. This is clearly a workplace that is a site of learning (Eames & Bell, 2005). The interactions with clients, professionals and co-workers provide plenty of opportunity for dialogic, mediated interactions where the student is provided with multiple perspectives and where expansive learning is taking place (Avis, 2009). The relationships between the Division of Labour-Community-Object (DOC) are significant in this system. The workplace is one that is strongly team-based and allows for the student to be exposed to role models, mentorship, and experienced co-workers who are supportive and willing to teach her. This positive environment nurtures her critical thinking and transformative learning (Blackler, 2009). She is in a position to observe a range of professionals at work and is given the power and authority to do her job as well as the opportunity to delegate specific tasks.

This empowerment acts as a tool or resource for the development of her self-formation and her ability act both for her benefit and the empowerment of others (Dirkx, 2012). The relationships in this section of the Activity triangle also reinforce each other. A community working in this team environment allows the object of the WIE experience to be more accessible to the student, supporting critical reflection and enabling transformative learning in an environment where the learning of the student and the system are intertwined (Tuomi-Gröhn et al., 2003). Similarly constructs in the Subject-Rules-Community (SRC) section of the workplace Activity triangle reflect the influence of the supervisor in instilling and reinforcing the value the organization places on holistic customer service. By establishing a culture of customer service the student is able to observe how co-workers interact with clients and has the opportunity to do so herself.

Again, this reinforces the goals of the object and allows for an outcome of transformative learning within this team-based, positive climate where critical reflection is valued and afforded the time required (Hanson, 2013).

### **Strength of Constructs**

To examine the strength of the relationship of the constructs against the elements, the means and standard deviations were used to map the constructs according to the categories: very useful-consistently, very useful—not as consistent, useful—consistently, useful—not as consistent, less useful—consistently and less useful—not as consistent. Very useful and consistent constructs (scores from 1-1.7 and standard deviations less than and equal to 1.0) were seen as consistently very useful towards enabling transformative learning across all of the transformative learning experience elements. Categorized according to activity theory they map out as:

- Tools: Both WIE and workplace *opportunity for hands-on learning* (C9) and workplace *able to observe professionals at work* (C7);
- Rules: Workplace *values and culture of workplace for holistic customer service* (C4);
- Community: Workplace *role models at workplace* (C5), *able to observe professionals at work* (C7) and *support and willingness to educate from co-workers* (C15); and
- Subject: The student from the WIE program *high levels of self-awareness* (C1) and *personally empowered* (C12).

There was one construct in the category very useful, but not as consistent (scores from 1-1.7 and standard deviations greater than 1.0):

- Tools: Workplace *opportunities to interact with clients* (C3).

Useful and consistent constructs (scores from 1.8-2.5 and standard deviations less than or equal to 1.0) were seen as consistently useful towards enabling transformative learning across all of the transformative learning experience elements. Categorized according to Activity theory they map out as:

- Community: Workplace *mentorship from others* (C13); and
- Division of Labour: Workplace *provided power and authority to do job requirements* (C11).

Four constructs were in the category of useful but not as consistent. These constructs had mean scores from 1.8-2.5 and standard deviations greater than 1.0. Categorized according to Activity theory they map out as:

- Tools: Workplace *opportunity to attend pro-d training at clinic* (C6) and *opportunity to sit in on initial assessment* (C10); and
- Community: Workplace *experienced co-workers* (C2) and *strong team approach* (C16).

Finally, the category of less useful and not as consistent had two constructs. These constructs had mean scores over 2.5 and standard deviations greater than 1.0. Categorized according to Activity theory they map out as:

- Tools: Workplace *access to resources at workplace*: (C8); and
- Division of Labour: Workplace *opportunity to delegate* (C14).

### **Strength of Constructs: Based on Experience Perspective**

The constructs were mapped onto the activity systems through the lens of the various experiences the student had, whether: constructivist, critical cultural,

psychoanalytical, situative, or enactivist. In summary, using Fenwick's (2000) categorization of experiential learning, these elements are depicted in Table 8 (Fenwick, 2000):

Table 8. *Case B Student T1 and T2: Transformative Learning Elements*

<p style="text-align: center;"><b>Constructivist</b></p> <ul style="list-style-type: none"> <li>• Realization that have strong listening skills recognized by clients</li> </ul>	<p style="text-align: center;"><b>Critical-cultural</b></p> <ul style="list-style-type: none"> <li>• Role that psychology and mental state play in healing</li> </ul>
<p style="text-align: center;"><b>Psychoanalytic</b></p> <ul style="list-style-type: none"> <li>• Realization about power of positive interactions with clients</li> <li>• Development of compassion for clients with challenges</li> <li>• Managed high stress levels to complete a challenging job</li> </ul>	<p style="text-align: center;"><b><u>Situative</u></b></p> <ul style="list-style-type: none"> <li>• Turning around a difficult employee to make a positive contribution</li> </ul> <p style="text-align: center;"><b><u>Enactivist</u></b></p> <ul style="list-style-type: none"> <li>• Personal empowerment that comes from helping others</li> </ul>

For the constructivist experience of: *realization that they have strong listening skills that are recognized by clients*. The following constructs were rated as very useful and useful:

- High levels of self-awareness;
- Opportunities to interact with clients;
- Values and culture of workplace for holistic customer service;
- Role models at workplace;

- Able to observe professionals at work;
- Opportunity for hands-on learning;
- Opportunity to sit in on initial assessment;
- Provided power and authority to do job requirements;
- Personally empowered; and
- Support and willingness to educate from co-workers.

Opportunities to learn and work and make meaning through active engagement in the workplace supported the critical reflection that allowed for transformation from this perspective (Mezirow, 1998).

For the critical cultural experience the student had *role of psychology and mental state plays in healing*. The following constructs that were rated as very useful and useful included those from the constructivist perspective, with the addition of:

- Opportunity to attend pro-d training at clinic;
- Access to resources at workplace;
- Mentorship from others; and
- Strong team approach.

The addition of training, resources, mentorship and team provided the ingredients for systemic critical self-reflection (Mezirow, 1998) of the many dimensions of recovery, a critical cultural perspective. As the narrative analysis supports, the student became much more aware of the many factors that influence the recovery process.

The psychoanalytical experiences of: *realization about the power of positive interactions with clients, development of compassion for clients with challenges, and managed high stress levels to deal with a challenging job*. The constructs that are

identified as very useful and useful were similar to the constructivist perspective with the addition of:

- Experienced co-workers; and
- Strong team approach.

For this psychoanalytical perspective the influence of the co-workers and team become more evident, as compared with the constructivist perspective, suggesting that these co-workers supportive narrative critical self-reflection in the student (Mezirow, 1998).

Considering the extensive narrative latent theme about communication, this narrative critical self-reflection occurred in a multitude of ways during the work term.

The situative experience, *turning around a difficult employee to make a positive contribution* and the enactivist experience, *personal empowerment that came from realizing how to help others* had the following set of constructs that were very useful and useful, similar to the constructivist perspective with the addition of:

- Experienced co-workers;
- Opportunity to attend pro-d training at clinic; and
- Mentorship from others.

These additional constructs indicate the way in which co-workers, access to professional training and mentorship enabled the student to engage in organizational critical self-reflection (Mezirow, 1998), engage in legitimate peripheral participation (Lave & Wenger, 1991) and have transformative experiences that led to her ability to empower others. The narrative analysis illustrated the extent to which the student was included in the team (a situative state), participated in co-configuration (enactivism) and was given the power to initiate change in the workplace (enactivism).

This level of analysis showed that there were differences in the weighting of the constructs against the elements depending on whether they were from a constructivist, critical-cultural, psychoanalytical, and situative or enactivist perspective. Certain enablers seemed to activate different types of critical self-reflection (narrative, systemic, organizational) that in turn resulted in transformative learning from different perspectives.

### **Connectivity Between Systems**

Figure 35 shows the connectivity between the WIE and the workplace activity systems. For this student Case B student, both in T1 and in T2, the construct C9: *hands-on learning* is a construct that connects both the WIE program and the workplace. It is because the WIE program is a hands-on learning program that the student was afforded the opportunity to be in the workplace. It is also because of this hands-on learning that the workplace hired the student and has been having her learn in the workplace in this same manner. This boundary spanning (Engeström, 2009) function that the educational program and workplace share is a strong connection with potential for each system to learn from the other.



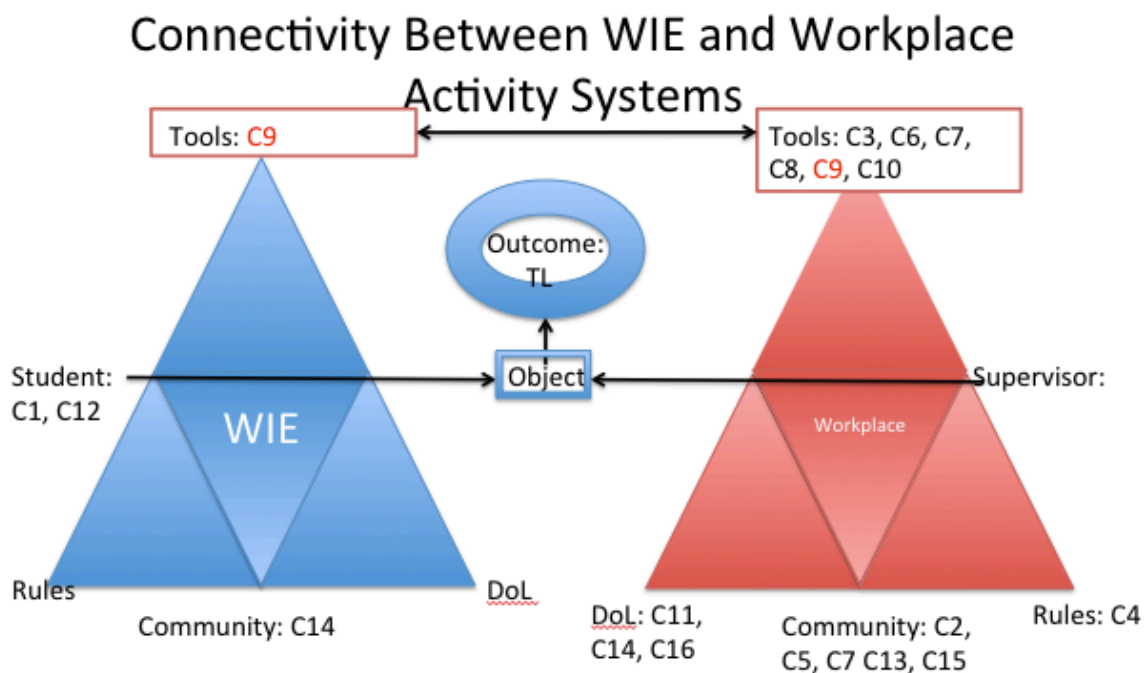


Figure 35. Connectivity Between WIE and Workplace Activity Systems: Case B Student

### Integration

The final component of the T2 interview was to explore the idea of integration of the transformative learning into the workplace and back into the WIE program. The student identified several contributions she had made, resulting from her transformational learning that integrated back into the workplace. The first example was her developing a revised training manual for the next WIE student. Her transformative learning experience of *managing high stress levels to complete a challenging job* and *development of compassion for clients with challenges* influenced what she included in the manual.

Time management definitely plays a role, but at this point, certainly high stress. I think it was in the first initial, couple of months, and that is definitely one of the things that I thought about when I was creating this. If I just had something laid

out where I could see, “This is the program; what is this; who do I talk to? Okay that is who it is.” It takes out some of that.

I didn’t used to warm up all the electrodes before I put them on someone. And then realized that someone who is in quite a bit of discomfort, or who is hyper sensitive, something as simple as a little jolt can be quite alarming and increase their discomfort. I never had an awful situation, but it was enough where I realized it would probably be nice to change that, and it was super easy to do.

She also provided an example where her transformative learning of *personal empowerment that comes from helping others* was integrated into the workplace:

I took it into my hands to create an inventory list just because I perceived that as being useful. There are lots of things that I do like that. Organizing, rearranging things, ordering supplies when they need to be ordered or conveying messages to people when things like that need to be done, and it is not necessarily laid out, “you are responsible to do this” but it is something that I see as being helpful.

When asked whether any of the constructs that had enabled her transformative learning had also enabled this integration, she indicated that the enablers of *being personally empowered* and *having a high level of self-awareness* enabled the integration of her learning into the workplace:

With being personally empowered, having a high level of self-awareness, I’m confident that if I talk to a client, I have the communication skills now to help someone if they are having a panic attack and I am comfortable talking to their

team about that and relaying the message and making sure they are getting the right level of support. None of that has been laid out in a job description.

Furthermore, the team environment, opportunity to interact with clients, opportunity to observe professionals, have role models, be mentored and educated by experienced and supportive co-workers, and access to resources have all enabled her to integrate her transformative learning back into the workplace. The following example relates to one of her responsibilities of developing programs for rehabilitation in the swimming pool.

A lot of them apply to how I am able to help the clinic by doing things like that and I have a lot more client interaction, and a lot more responsibility now that I'm running the pool program. I'm directly part of their team. I am working with their kinesiologist and their physiotherapist. I also get to see what exercises they are working on, and talk to their kinesiologist about, or physiotherapist. The physiotherapist will tell me what contraindications they have, what to stay away from, maybe what their emotional state is at, if they are prone to panic attacks. Things like that. And then I take that information, create a pool program for them, and I am charting and communicating with them that way, letting them know of any progress or any incidents, that kind of thing. A lot of those really, really directly apply to that.

Finally, the construct of the organization valuing holistic customer service also enabled her integration:

The more confident I get in my job position and my ability to interact with clients, I think it is really just helping overall with how satisfied people are with their

experience. Something as little as making sure that someone is the most comfortable they possibly can be while they are getting an ultrasound treatment. Or educating them and being really confident in my answer that I give, gives them a lot of piece of mind, and overall they leave the clinic thinking that it was a really great experience. I think that all of these things are helping me do that.

When asked how these constructs might have enabled her WIE program learning she spoke eloquently about the influence of the enablers of *role models, mentorship, being able to observe professionals, access to resources, opportunities to attend professional development and being part of a team* have played in shaping her perspective on subsequent schooling.

She also expressed her frustration at the lack of hands-on learning opportunities afforded her by her program and how the WIE experiences have enhanced her overall program experience.

Well, I think that one thing that has always frustrated me, there is not a lot of places to apply what we are learning. I have all these labs, but there is not a lot of real world examples of how I can apply this. . . . You can't get around the school part, and that is why I chose to do co-op to have that experience again, where I get to apply those things. I think that I'm going to be looking at my classes a little bit differently and as opposed to trying to cram it into my head and get a grade, I want to actually apply those things.

The student identified the construct of role models as another enabler of integration into her program.

I had just a fantastic professor and he really instilled a lot of passion in his students. He really gave us every opportunity we needed to excel. Because he lived that way himself and he really was passionate about what he was teaching, got excited about it, and he wanted to apply it. He gave us all these different suggestions and outlets and relayed all these stories of himself and how he applied that and things like that, I think that he leads by a good example and made me want to do really well in the class and do the same sort of things.

In summary, the student stated that many of the constructs that she identified as enabling her transformative learning while on the workplace were enablers of her program and vice-versa.

Yes, I think a lot of them are really relevant. So much of what I took from school, I applied to the co-op in terms of organization, time management, being personally empowered is super relevant. When I'm confident about my abilities and confident about my priorities and my ability to study, learn and retain knowledge, the results are much better, than if I am in a negative space, have a negative attitude or not looking at the attaining the knowledge for the right reasons.

In this case we see the importance of a positive environment, the opportunity to have the time and value given to transformative processes and the institutional requirements of team work, holistic service fostering the critical self-reflection in this student (Hanson, 2013). This is clearly a workplace that considers itself a learning environment (Guile & Young, 2003) and affords these resources to the student. The growth in her self-

awareness has led to her own empowerment and this has not only resulted in self-formation, but a clear desire and ability to empower others and create positive change (Taylor, 2008). Furthermore, in her description of self-awareness, we see an example of co-configuration (Engeström, 2009). She has entered this system as a student, is interacting with professionals who provide her with mentorship and role modelling, and she in turn is interacting with clients—all resulting in co-configuring the outcome:

Self-awareness to me, means being aware of what impact your interactions are having with other people, how your emotional well being is, how other people are reacting to you and how you are reacting to others and understanding that. I think that I understand about myself that I have very similar values that the company does.

The integration of the transformative learning this student has experienced and the enabling constructs for this integration are shown in Figure 36:

## Integration of Outcome Between WIE and Workplace Activity Systems

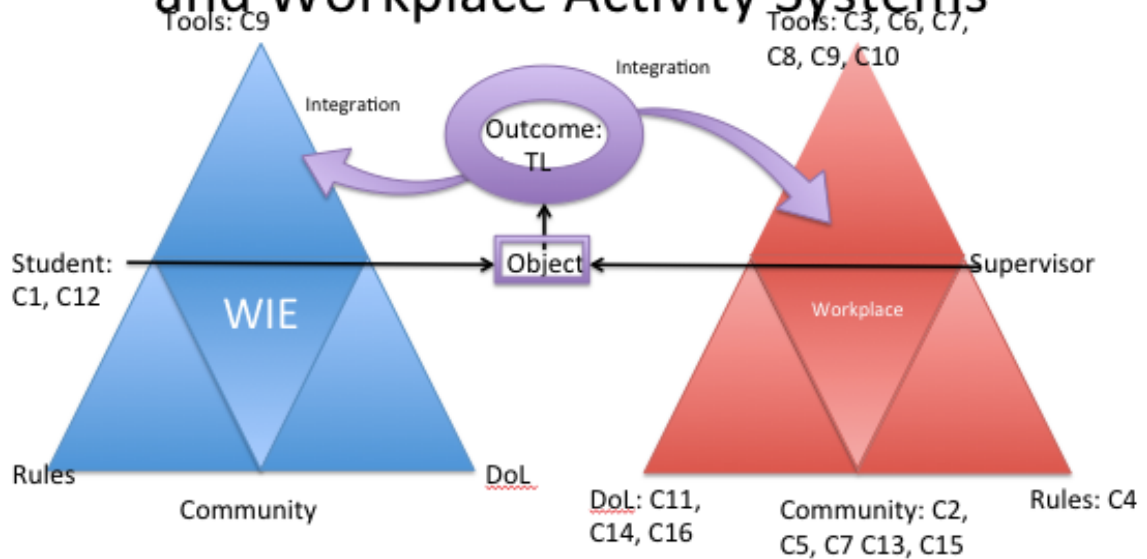


Figure 36: Case B Student Integration of Outcome Between WIE and Workplace

### Results from Interviews: Case B Supervisor T1

#### Transformative Learning: Elements

To ensure consistency of understanding, the supervisor was asked to describe what transformative learning meant to him. He expressed his understanding of the concept as:

To me I would describe that as that “eye-opener” experience. The “holy smokes” I didn’t know about that, or I haven’t had an opportunity to experience that. Now I have. That is going to allow me to grow and develop.

The supervisor had been a WIE student himself and has been hiring WIE students since 1998. As such was able to identify many examples of transformative learning that he had

observed in WIE student on work terms with his organization. The first example, *dealing with a challenging client situation* was explained as follows:

I think in general, the biggest transformational learning opportunities present when there is a challenge care that comes up. Typically those biggest moments have happened when perhaps they were quite independently involved with the client at the time. It became a situation where “Oh my God, I’m not sure what I’m doing here and how I should handle this.” They handled it, right or wrongly, but they handled it. And then there is reflection in conversation and discussion that happened afterwards.

The second example of transformative learning is when the students start *realizing what different professions bring to care of client*.

The opportunity to experience a variety of health professionals within their roles, managing the same patient. They get to witness the impact that each discipline has on one specific client, the way those disciplines interact with each other towards a goal.

It is through observing these various professionals at work that the students see the role each discipline plays in the overall care of the client. The supervisor went on to explain that this results in transformative learning about the way health care professions work and interact, but in allowing the students to observe these interactions they begin to identify as part of the care team themselves.

This third example is labelled *starting to identify as part of the caring team*:



Slowly they learn, or some of them do, or they gain the confidence in themselves to become part of the process. They are now an interactive team member having that same clinical conversation around how to best manage this patient.

A fourth example of transformative learning that the supervisor had observed is seeing the student's growth in confidence:

They discover that there is that confidence within themselves, they start to discover that their training, their skills can actually lead them down this path a lot further than they might have originally or initially anticipated.

This fifth example is called: *developing self-confidence*. Having this self-confidence enables the student to develop the skills so that they can act upon the knowledge they have acquired, leading to the sixth example labelled: *developing agency around knowledge so can apply it appropriately*. The supervisor explained:

Acting on it and developing skills that allows them to act on it. You may have the knowledge but if you don't have the skills to deliver it, it usually doesn't go over well.

The supervisor explained that transformative learning is also observed when the student realizes that there is a psychosocial and behavioural dimension to the recovery process. This is transformative in that most students' prior experience would have been with a healthy population, or a population interested in becoming healthier or fitter. In the case of many of this clinic's clients that is not necessarily the case. They are at the clinic in order to be well enough to go back to work, and in some cases the client does not share

that goal. This seventh example is labelled *appreciating psychosocial and behavioural dimension to the recovery process*:

Definitely appreciating that whole psychosocial/behavioural component to the recovery process and the influences that that has. It speaks to client motivations, goal setting and it also speaks to the interdisciplinary care model that we provide. The more of those psychosocial influences that you have, the more you need to bring other disciplines in to resolve those issues.

Following on this point, the supervisor noted that the approach taken at the clinic involved multidisciplinary teams, and that for many students working within this environment resulted in transformative learning as they came to see the value that such an approach plays in the overall recovery process of clients dealing with complex psychosocial and behavioural challenges. This eighth example is labelled *learning the value of the multi-disciplinary team*:

They also learn the value of the multidisciplinary team as well, because if they are trying to deal with that on their own, independently, out in the community, it is much more difficult to do that.

The final transformative learning example given related to the business nature of the clinic. As a private sector enterprise the students are exposed to issues of customer demand, payment, marketing, profit and loss all in a context of giving quality care. This often presents a transformative learning called: *realizing the challenges of running a private business*. The supervisor went on to explain:

For some it is recognizing how difficult it may be to actually take on, or run, a private business. Lots of physios come into big centres like this with the grand vision that some day they will have their own clinic. When they actually learn how much of a challenge it is to be a successful private business owner and all the things that go along with that, many of them don't go down that path.

### **Transformative Learning: Constructs**

The supervisor identified sixteen enablers, or constructs, of these transformative learning moments. The first of these is labelled: *being fully briefed on client circumstances*. In describing this construct the supervisor used the example of how learning is compromised when the student is not fully aware of the client's situation:

One not being aware of what the others were doing or saying that put the student in a vulnerable position, being out of the know, if you will. That could look like not being fully aware of the treatment plan, not being fully aware of the medical indicators, or the contra indications.

Therefore actually being fully and properly briefed is an important enabler of transformative learning.

The second construct relates to the volume of information and work that the student is expected to deal with. In order to manage this load the student needs strong time management and prioritization skills.

Many times there is the overwhelming component. It is not that they have been fully briefed, but they have been so fully briefed and there are so many clients,

there is that whole prioritization, time management, organizational skill that has to come into play. They have to figure out what is important and when.

This construct, labelled: *having strong prioritization/time management skills* was considered an important enabler.

Building on this is the third construct labelled: *knowing what is important* that the supervisor acknowledged was similar to prioritization but singled it out as significant:

Being able to identify what is important and what is not so important.

The fourth construct addressed interpersonal relations wherein the student's ability to manage the range of personalities and personality conflicts was seen as an enabler of transformative learning. This fourth construct is labelled *able to manage interpersonal relations*:

Certainly there is always the whole dimension around personality, personality conflicts. A very diverse population of patients in here, and we can't always get along with everybody. It happens and how you manage that.

NM: Managing interpersonal relations.

Yes. That goes for staff and clients.

The fifth construct relates to the multidisciplinary nature of the workplace. Labelled: *a multidisciplinary treatment philosophy* this philosophy enables transformative learning by exposing the student to a range of professionals in multidisciplinary team environments. This exposure enabled the student to realize what different professions bring to the treatment of the client.

Essentially that is our treatment philosophy, that is our practice philosophy.

Multidisciplinary intervention. Clinically that looks like team meetings, and that can be amongst clinicians only, or it may be involve clients, and/or case managers and doctors, legal council.

The sixth construct, *realizing they have something of value to offer the team* enabled transformative learning where the student was able to see themselves as valued members of the team through their contributions:

I think that is the eventual realization that they can have some thing to contribute and it is valued by the other team members. Some students take a while to figure that out. Some students may not figure that out. . . . Realizing, that is the important part. Realizing that they have something to offer. . . . If we go back to that realizing they have something to offer that can occur on so many different levels, whether they realize they are influencing customer service expectation, contributing in a clinical sense to the treatment plan, making somebody else's job more efficient.

Being afforded a range of opportunities to contribute was identified as an enabler, and the seventh construct: *having a vast range of opportunities*. Through these various opportunities the student is exposed to many situations where they can contribute their knowledge or skills, and eventually come to realize they have something of value to contribute:

A vast range of opportunities to come to the realization.

NM: Some may see it in one area more than in another?

Absolutely.

NM: So if there were a vast range that at some point it would happen, you would think.

They would trip upon it. For sure.

In addition to having a range of opportunities, the supervisor identified: *a learning environment* as the eighth construct. At the clinic there are many opportunities for learning that the students are welcome to participate in:

We promote a learning environment. We have clinical lunch and learns, workshops where clinicians are sharing knowledge about the latest and greatest article or course or whatever it is that they have come across.

Having this environment that promotes learning enables the student to learn as much as possible from their work term experiences.

A learning environment also includes mentorship. The students have individual interactions with the health care professionals on a day-to-day basis that supports their ongoing learning. This ninth construct is labelled *mentorship available*, is described as follows:

There is the one to one mentorship that is a large part of what they do here. They are learning most directly from the physios, but also from the kinesiologists.

Expanding their knowledge around the disability management and clinical intervention. That is a big one.

Not only do the students learn from professional mentors, but the supervisor also felt that the students' transformative learning was enabled through learning from clients as a result of client interactions: "They also get to learn from the clients as well." This tenth construct is labelled *client interaction*.

The eleventh enabler is labelled *competency framework*. The supervisor spoke to the value of the competency framework used by the WIE program in that it helped students identify their learning and what competencies they need.

The co-op program, more recently, particularly with the shift towards the competencies helps them to realize what they are learning and the value in it, and where that learning is helping them to grow and develop and/or why some of these competencies are important to them to grow and develop. I think that is a beneficial process.

In addition to what the student learns on the work term, the supervisor felt that the encouragement the students receive from their WIE coordinator to grow outside of the work term was an important enabler:

Certainly X encourages growth outside of the specific work term placement as well. She is always asking the question about "What else are you doing, or getting involved in that might expand your perspective on what you are doing here? How might that influence what you are doing here? Improve upon what you are doing in your placement?" I think that is a good process.

This twelfth enabler is labelled *encouragement to grow outside of work term*.

The clinic is involved in the community through a variety of charity events. The supervisor felt that because the organization is socially minded it enabled the student to have transformative learning moments. This thirteenth construct is *socially responsible organization-community engagement*:

We are also a very socially conscious organization and group. Part of our mission statement is to improve upon the health and wellness of our community and the communities in which we run our businesses. That occurs on a bunch of different levels. At the clinical level it is about what we are giving back to the community. We do food bank fundraisers. We have our MS fundraisers. Corporate rowing teams and challenges.

In being a social-minded organization, not only does this expose the student to thinking about community engagement and social responsibility but it also allowed for a range of special projects through the fundraising ventures:

The students have opportunity to participate in that.

NM: That dimension of additional projects?

Yes, additional projects, special projects, opportunities to participate in special projects, hopefully to learn and recognize the value of the social responsibility.

This fourteenth construct is *opportunity to participate in special projects*.

Looking back into the organization itself, the supervisor identified the fifteenth construct *having a safe team environment to develop confidence* as an enabler of transformative learning:



This is a fairly safe environment because we have a multidisciplinary team, there is that perception of safety in numbers. That allows that confidence to build slowly. You can move from doing this as part of a group to doing this independently. That is another confidence builder, or an opportunity for skill development in a safe environment.

The final, and sixteenth, construct identified by the supervisor is *clear communication and instruction*. In the context of the working environment, having clear communication within and between members of the multidisciplinary care teams was seen as a crucial enabler to that safe environment and the ensuing confidence the student would develop:

It only works if the team is delivering the same message, mind you. The best example, say we do a clinical round, there is a team conference around an individual's treatment plan. The team decides the way we are going to move forward with this client. The student can then say, "okay, team decision, I know what I need to do," I'm going to go forth and promote this to the client, or share this with the client. "I can be relatively confident that this is the right path, decision.

### **Repertory Grid Results**

Figure 37 shows the ranking by the supervisor of each enabler of transformative learning (the construct) against each identified transformative learning example (the element).

Display Case B - Employer T1 (Large Private Sector firm)  
"To elicit constructs on enablers of transformative learning during co-op"

Being fully briefed on client circumstances	3 1 1 1 1 1 1 3	Not being briefed on client circumstances
Having strong prioritization/timemanagement skills	4 2 3 3 4 4 2 1	Weak prioritization and time management skills
Knowing what is important	1 1 2 1 1 1 1 1	Not knowing what is important
Able to manage interpersonal relations	1 2 1 1 2 3 1 2	Not managing interpersonal relations
a Multidisciplinary treatment philosophy	2 3 1 4 3 2 1 2	Not having am multidisciplinary treatment philosophy
realizing they have something of value to offer the team	3 1 1 1 2 3 1 3	Not realizing they have something of value to offer the team
Having a vast range of opportunities	3 2 3 1 1 1 1 1	Not having a vast range of opportunitiy
A learning environment	3 2 2 1 1 1 2 1	Not a learning environment
Mentorship available	2 2 1 1 1 1 1 1	No mentorship availalbe
Client interaction	1 1 3 1 1 1 1 3	No client interaction
Competency framework	2 3 2 2 1 3 3 2	No competency framework
Encouragement to grow outside of workterm	2 3 3 1 1 1 3 1	No encouragement to grow outside of workterm
Socially responsible organization - community engagement	3 4 4 4 4 1 4 1	Not a socially responsible organization- no community engagement
Opportunity to participate in special projects	3 4 5 2 1 3 3 1	No opportunity to participate in special projects
Having a safe team environment to develop confidence	1 1 1 1 1 1 1 3	Not having a safe team environment
Clear communication and instruction	1 1 2 1 1 2 1 2	Not clear communication and instruction

Realizing the challenges of running a private business  
 Learning the value of the multi-disciplinary team  
 Appreciating psycho-social and behavioural dimension to the recovery process  
 Developing agency around knowledge so can apply it appropriately  
 Developing self-confidence  
 Starting to identify as part of the caring team  
 Realizing what different professions bring to care of client  
 Dealing with a challenging client situation

Figure 37: Repertory Grid Results: Case B Supervisor T1

## Repertory Grid Results: Case B Supervisor T2

### Transformative Learning: Elements

When interviewed at the end of the work term the supervisor did not add any new elements in T2.

### Transformative Learning: Constructs

Similarly, the supervisor did not add any new constructs in T2. He changed the ratings for three constructs and this resulted in a small change to the statistics for the constructs. The resultant change was that *having strong prioritization/time management skills* moved from being “less useful—not as consistent” to “less useful—consistently.” The revised statistics are shown in Table 9 below, with the statistics for T1 in black font and the changed statistic in T2 in red font.

Table 9. Case B Supervisor T2 Means and Standard Deviations

	<b>Standard Deviation=<math>\leq</math>1</b>	<b>Standard Deviation=<math>\geq</math>1</b>
<b>Mean = 1 to 1.7</b>	<p><b>Very Useful Enabler—</b></p> <p><b>Consistently</b></p> <p>C3. Knowing what is important</p> <p>C15. Having a safe team environment to develop</p> <p>C9. Mentorship available confidence</p> <p>C16. Clear communication and instruction</p> <p>C10. Client interaction</p> <p>C1. Being fully briefed on client circumstances</p> <p>C4. Able to manage interpersonal relations</p> <p>C7. Having a vast range of opportunities</p> <p>C8. A learning environment</p>	<p><b>Very Useful Enabler—Not as Consistent</b></p>
<b>Mean = 1.8 to 2.5</b>	<p><b>Useful Enabler—Consistently</b></p> <p>C12. Encouragement to grow outside of work term</p> <p>C5. Multidisciplinary treatment philosophy</p>	<p><b>Useful Enabler—Not as Consistent</b></p>

	C11. Competency framework C6. Realizing they have something of value to offer the team	
<b>Mean= 2.6 to 5.0</b>	<b>Less Useful Enabler—Consistently</b> <b>C2. Having strong prioritization/time management skills</b>	<b>Less Useful Enabler—Not as Consistent</b> C14. Opportunity to participate in special projects C13. Socially responsible organization - community engagement
	<b>Standard Deviation= &lt;/=1</b>	<b>Standard Deviation=&gt;1</b>

The focus, or matching between the elements and constructs at T2 can be seen in Figure 38.

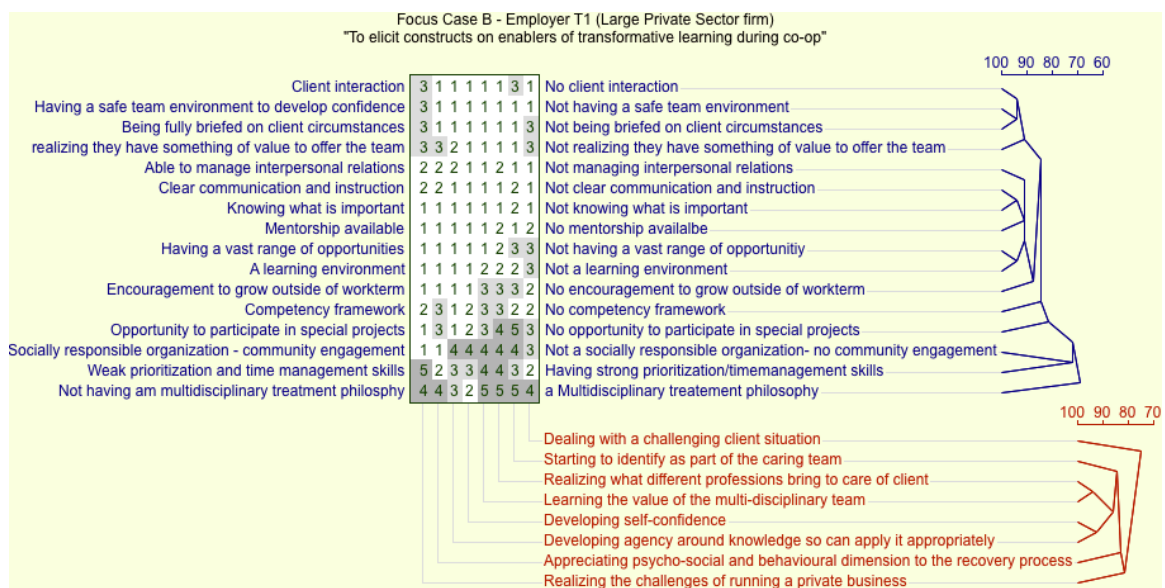


Figure 38. Case B Supervisor T2: Focus of Elements and Constructs

The elements, *realizing what different professions bring to the care of a client* and *learning the value of a multidisciplinary team* were closely aligned. The supervisor indicated that it made sense, explaining:

Certainly one doesn't come with out the other. They are quite similar. If they learn the value of the multidisciplinary team, they are going to be realizing what different professions bring to the care of the client. That could probably be incorporated into one.

The next set of elements was examined: *developing self-confidence* and *developing agency around knowledge so can apply it appropriately*. The supervisor agreed that they were aligned, but that they should remain as separate elements:

That makes sense. I would keep those separate. I think you can have one without the other, in either direction.

As a result of reviewing these aligned elements, the first set of matches (*realizing what different professions bring to the care of a client* and *learning the value of a multidisciplinary team*) were collapsed into one re-named: *learning the value of a multidisciplinary team*.

The supervisor was asked to examine the closely aligned constructs of *having a safe team environment to develop confidence* and *being fully briefed on client circumstances*. He confirmed that it made sense that they were aligned, but still separate constructs. In explaining why the constructs: *clear communication and instruction* and *knowing what is important* were matched the supervisor stated:

I assume it is pairing it there because without clear instruction, you don't necessarily know what you need or are required to do. But I see certainly individuals that come with this inherent ability to "focus their attention on what is important," and that is without instruction or communication. They just seem to know what requires their full attention, whereas others don't have that inherent skill.

Similarly, the supervisor explained the alignment, yet separateness of the constructs: *a range of opportunities* and *a learning environment*.

I think they deserve to be separate. You can have one without the other.

In summary, while one set of matched elements was collapsed from two elements to one, the remainder of the elements and the aligned constructs stayed separate.

### **Narrative Analysis: T1**

An analysis of the narrative from the supervisor's T1 interview identified five latent themes: *learning, benefitting from the team, and gaining confidence, communication and business considerations*. The supervisor emphasized the workplace as being a learning environment:

We promote a learning environment. We have clinical lunch and learns, workshops where clinicians are sharing knowledge about the latest and greatest article or course or whatever it is that they have come across.

Learning is supported in a variety of different forms such as: "mentorship," opportunities to "learn from clients" and participate in "special projects." As a way to assess learning,

the supervisor expressed support for the competency assessment process used by the WIE program:

The competencies help them to realize what they are learning and the value in it, and where that learning is helping them to grow and develop and/or why some of these competencies are important to them to grow and develop. I think that is a beneficial process.

The supervisor stated the importance of the application of learning and skill development:

Acting on it and developing skills that allow them to act on it. You may have the knowledge but if you don't have the skills to deliver it, it usually doesn't go over well.

The multidisciplinary team was the second theme that the supervisor identified. He commented on how the team benefitted the student by allowing the student to “experience a variety of health professionals within their roles” who work together to resolve complex patient care issues and involve the student as an “interactive team member.” The second dimension to this team theme builds on this latter point—the involvement of the student as they begin to realize that they have “something to contribute” and that it is “valued by other team members.”

Contributing to the team leads to the third theme of gaining confidence. The supervisor noted that the team provided a “safe environment” that set the stage for contributions and confidence:

A fairly safe environment because we have a multidisciplinary team, there is that perception of safety in numbers. That allows that confidence to build slowly. You

can move from doing this as part of a group to doing this independently. That is another confidence builder, or an opportunity for skill development in a safe environment.

Having a team approach that provides a safe environment for the student required strong communications, the fourth latent theme. The supervisor talked about situations where problems resulted from poor communications:

Poor communication between team members. One not being aware of what the others were doing or saying that put the student in a vulnerable position, being out of the know, if you will.

However, when the “team is delivering the same message” the communication safety net is there for the student.

The final latent theme related to business considerations for this small, private organization. This influenced the supervisor’s decision to hire WIE students as “cost-effective labour” and part of their “recruitment strategy.” In addition, the supervisor considered it a valuable learning environment for students considering opening up their own clinics:

When they actually learn how much of a challenge it is to be a successful private business owner and all the things that go along with that, many of them don’t go down that path.

### **Narrative Analysis: T2**

The narrative themes identified in T1 of: *learning, benefitting from the team, gaining confidence, communication and business considerations* were expanded upon in



T2. The supervisor talked about the key role that learning opportunities played in engaging all staff, including the student and the business case to be made:

If we don't have these opportunities or create these opportunities or these paths for development that we are more likely to lose those employees. Usually after a lot of investment of time, money, and resources have been spent training and developing the staff in their roles. There is definitely a return on investment there.

In addition to retaining staff, another result of offering these opportunities for learning and development is a heightened interest in more:

The difference has been in their engagement of what we do and how we do it. There is an enthusiasm there for the learning, and a motivation, or initiative to seek out additional opportunities.

This interest then poses the challenge of keeping up with demand for learning experiences:

If you don't continue to present those opportunities that has an impact. For some people it can have an impact really quickly and you can see their engagement fall off dramatically. If they visualize their development path and don't see exciting opportunities for growth, engagement falls off very quickly and now you have an HR problem. There is definitely a challenge in continuing to present new and different learning opportunities.

The themes relating to team and gaining confidence were expanded with the additional comment about time. The supervisor prefers to have students for an eight-

month time period rather than the standard four months in order to allow that time for the student to become a contributing team member.

It is not long enough. In an additional 4 months you often see a good turnaround where they are not so much the student anymore, but actually a contributing member of the team and the service.

### **Data Interpretation and Discussion: Supervisor Case B T1**

Using activity theory for both the WIE program and the workplace, and using the descriptions of the dimensions of the system as described by Roth and Lee (2007) and Marken (2006), the supervisor's constructs seemed to map onto the areas of the triangle as follows and shown in Figure 39:

- Tools (the means by which the activity takes place). From the WIE program and workplace: the *competency framework* (C11). From just the workplace: *full briefing on client needs* (C1), *vast range of opportunities* (C7), *opportunities to participate in special projects* (C14) and *clear communications* (C16);
- Subject (the student): *realizing they have something of value to offer* (C6) *time management/prioritization skills* (C2), *knowing what is important* (C3), and *able to manage interpersonal relations* (C4);
- Rules (the cultural norms, standards, guidelines). From the workplace: *multidisciplinary treatment philosophy* (C5), *a learning environment* (C8), *client interaction* (C10) and *a socially responsible organization-community engagement* (C13). From the WIE program: *encouragement to grow outside of work term* (C12); and

- Community (socio-cultural environment in which the activity takes place). From the workplace: *mentorship available (C9)* and *a safe environment (C15)*.

## WIE and Workplace Activity Systems

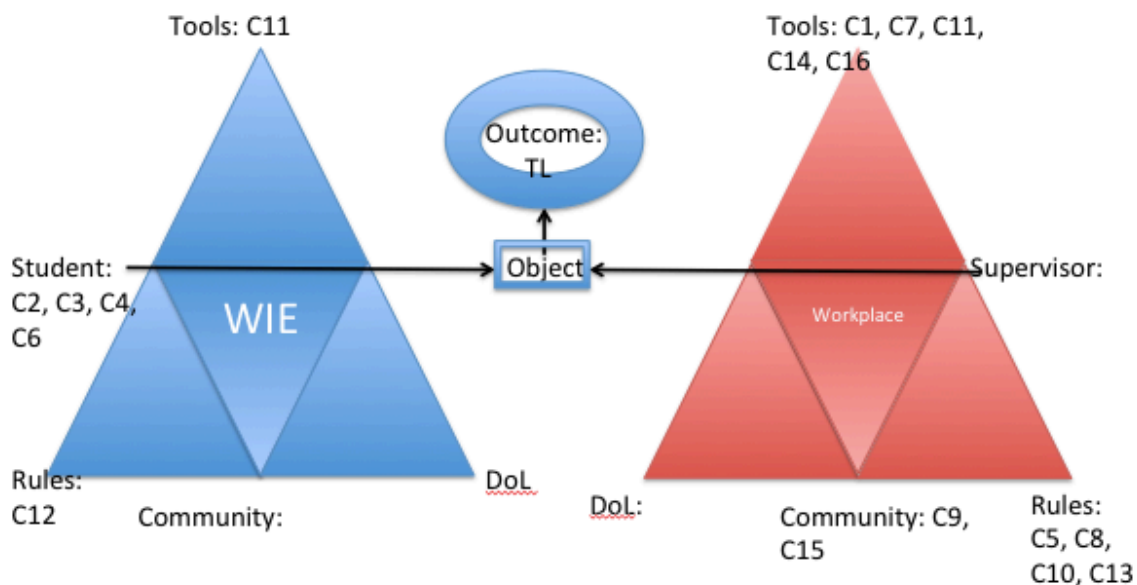


Figure 39. Activity Systems With Construct Mapping: Case B Supervisor T1

### Dynamism in the Activity Systems

The sub-triangle areas of Subject-Object-Tools (SOT) and Subject-Rules-Community (SRC) show as being the most active regions of the WIE program activity system as seen in Figure 40.

## Dynamism within WIE Activity System

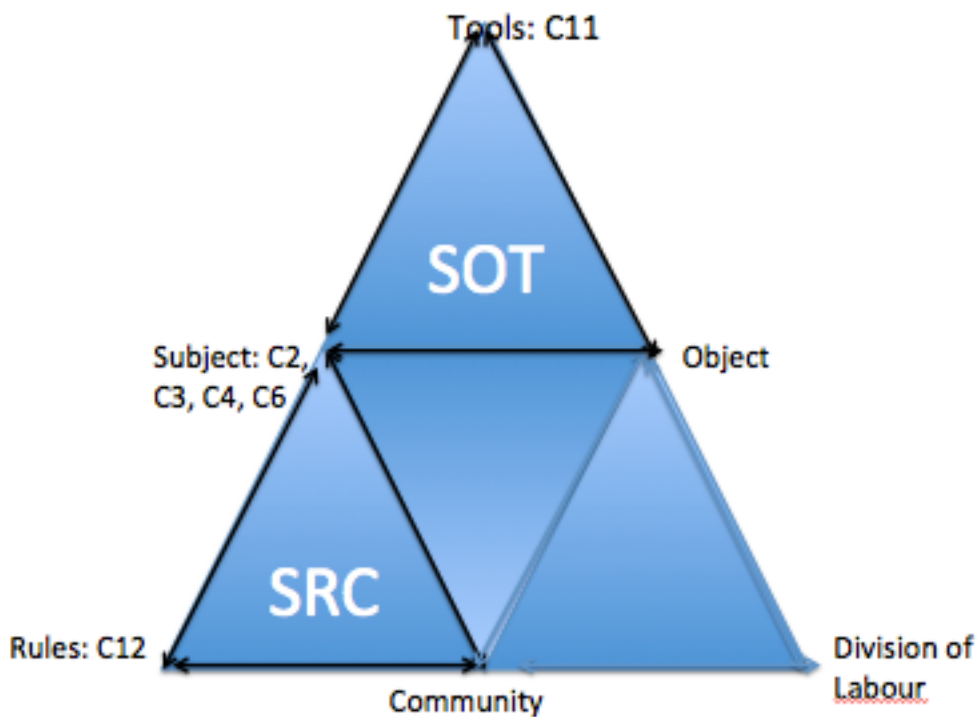


Figure 40. Case B Supervisor T1: Dynamism Within WIE Program System

The *competency framework* tool used by the student subject helps to identify what skills, knowledge and attributes they have, which ones are important and how they are developing on the work term. The dynamic tension between what they perceive in themselves, and the competency assessment provided by their supervisor helps them develop their agency around these competencies, contribute to the workplace and thereby enabled their transformative learning. The supervisor describes this dynamic process:

The co-op program, more recently, particularly with the shift towards the competencies helps them to realize what they are learning and the value in it, and where that learning is helping them to grow and develop and/or why some of

these competencies are important to them to grow and develop. I think that is a beneficial process.

The SRC sub-triangle incorporates the rule of *encouragement to grow outside of the work term* from the WIE coordinator, a member of their WIE community. The supervisor explains how he has observed the coordinator enact this dialectical process:

She is always asking the question “What else are you doing, or getting involved in that might expand your perspective on what you are doing here? How might that influence what you are doing here? Improve upon what you are doing in your placement?” I think that is a good process.

The tensions that arise from this external activity impact the student’s understanding of what they know and what they need to know, and contributes to their personal and social transformation as was exemplified with the student’s work on a fundraising activity for a local charity.

In fact X has done a wonderful job promoting our Hustle for Hunger which was a 10k run to raise money and food donations for the food bank. She pretty much independently organized that one for us this year. That was a fantastic learning opportunity.

The dynamism within the Workplace Activity System is also most evident in the SOT and SRC sub-triangles, seen in Figure 41.

## Dynamism within Workplace Activity

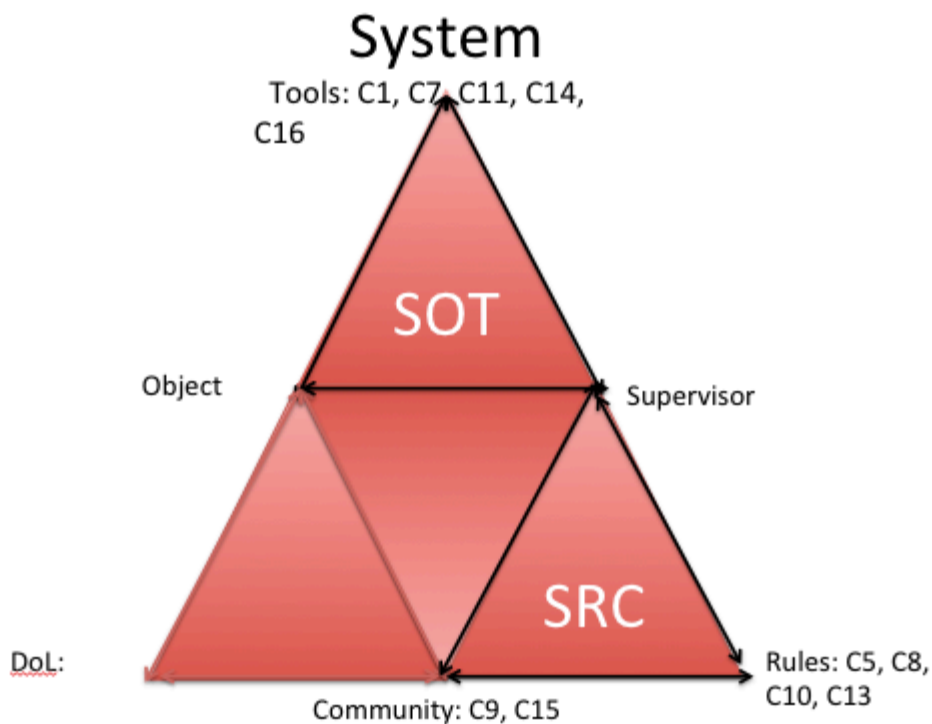


Figure 41. Case B Supervisor T1: Dynamism Within Workplace System

Within the SOT sub-triangle, the workplace tools of *being fully briefed on client circumstances, having a vast range of opportunities, using the competency framework, having opportunities to participate in special projects and receiving clear communications and instructions* all contribute to the extent of work, and the communications about that work, to ensure variety with support. The supervisor provided the following example to describe this dialogic, mediated process:

The best example, say we do a clinical round, there is a team conference around an individual's treatment plan. The team decides the way we are going to move forward with this client. The student can then say, "Okay, team decision, I know what I need to do."

The dynamism within this sub-triangle contribute to the transformative learning of: dealing with challenging client situations, appreciating the psycho-social and behavioural dimensions of working with a wide range of clients, developing agency around knowledge as it is applied against the work. The communications processes that support these enablers were clearly expressed both explicitly through the repertory grid process and in an analysis of the narrative themes.

The SRC sub-triangle brings in the dimension of the multidisciplinary treatment philosophy, the learning environment, the value of client interactions and a socially responsible organizational culture. These rules interact with the workplace community such that it is a workplace that fosters mentorship and creating a safe environment. These interactions influence the work and enable the transformative learning about the value of a multi-disciplinary team, realizing what different professions bring to client care and the development of self-confidence. In the supervisor's words:

This is a fairly safe environment because we have a multidisciplinary team, there is that perception of safety in numbers. That allows that confidence to build slowly. You can move from doing this as part of a group to doing this independently. That is another confidence builder, or an opportunity for skill development in a safe environment.

### **Strength of Constructs**

To examine the strength of the relationship of the constructs against the elements, the means and standard deviations were used to map the constructs according to the relevant categories: very useful—consistently, useful—consistently, and less useful—not as consistent.

Very useful—consistently constructs had mean scores from 1-1.7 and standard deviations less than and equal to 1.0. Categorized according to Activity theory they map out as:

- Tools: Workplace *being fully briefed on client circumstances* (C1), *having a vast range of opportunities* (C7), and *clear communication and instruction* (C16);
- Rules: Workplace *a learning environment* (C8) and *client interaction* (C10);
- Community: Workplace: *mentorship available* (C9) and *having a safe team environment to develop confidence* (C15); and
- Subject: The student from the WIE program: *knowing what is important* (C3) and *able to manage interpersonal relations* (C4).

Useful and consistent constructs had mean scores from 1.8-2.5 and standard deviations less than or equal to 1.0, they map out as:

- Tools: WIE Program and Workplace: *competency framework* (C11);
- Subject: Student: *realizing they have something of value to offer the team* (C6);
- Rules: WIE Program: *encouragement to grow outside of work term* (C12); and
- Rules: Workplace: *a multidisciplinary treatment philosophy* (C5).

Less useful, and inconsistent were constructs with mean scores over 2.5 and standard deviations greater than 1.0, they map out as:

- Tools: Workplace: *opportunity to participate in special projects* (C14);
- Subject: Student: *having strong prioritization/time management skills* (C2); and
- Rules: Workplace: *socially responsible organization-community engagement* (C13).



## Connectivity Between Systems

Figure 42 shows the connectivity between the WIE and the workplace activity systems. For the Case B supervisor at T1, the construct (C11): *competency framework* is a construct that connects both the WIE program and the workplace, an example of boundary spanning (Engeström, 2009). The WIE program requires that each student completes a self-assessment of their competency level on a set of core and discipline specific competencies at the beginning, mid and final point of the work term. Their workplace supervisor (who also completes an assessment of the student's competencies) reviews the student's self-assessments. These assessments form part of the overall assessment for the work term and are discussed during the mid-term work site visit with the WIE coordinator. As a result, this system provides connectivity, in addition to the student, between the two systems.

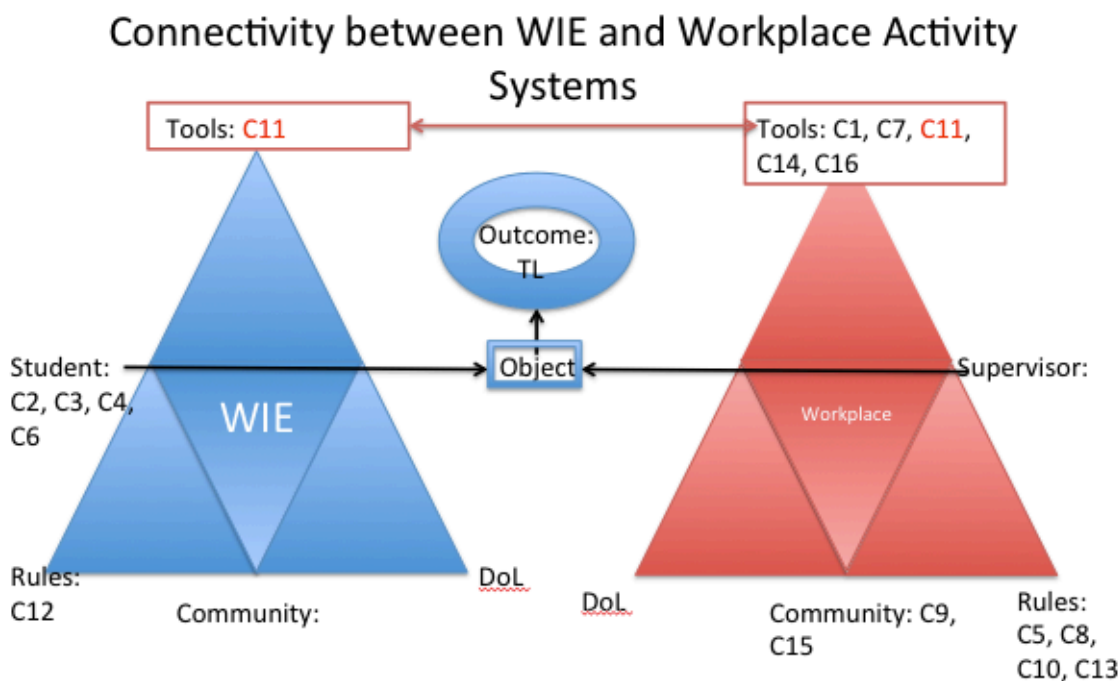


Figure 42. Case B Supervisor T1 Connectivity

## Data Interpretation and Discussion: Supervisor Case B T2

Given that the constructs remained the same in T2 the WIE and workplace activity systems remained unchanged in T2 (Figure 43).

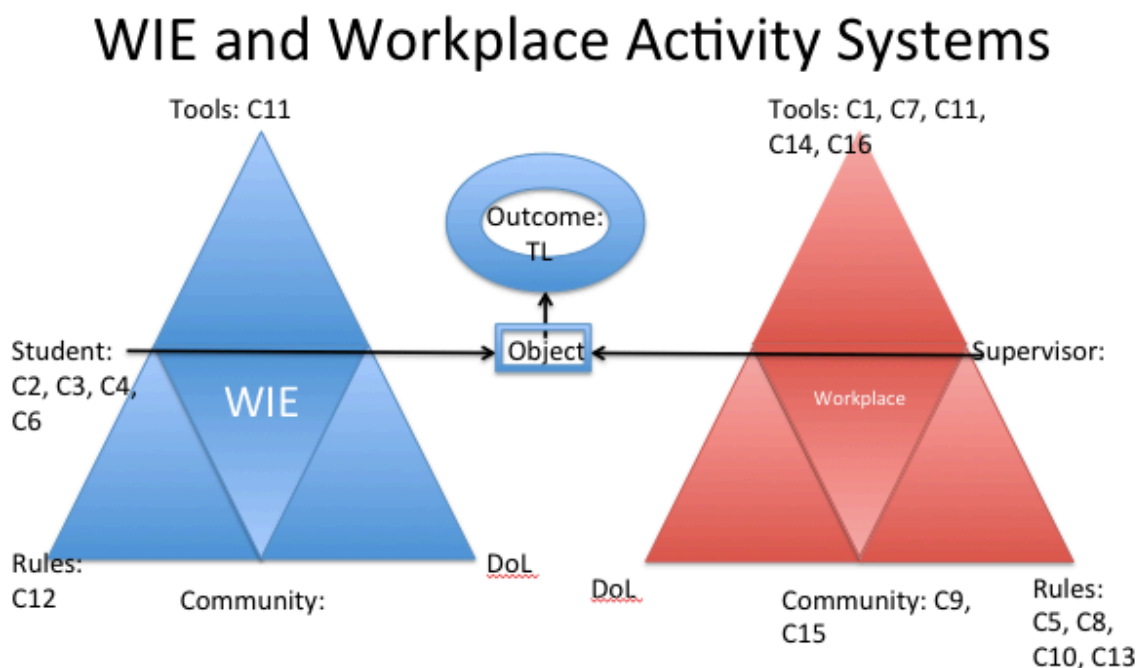


Figure 43. Case B Supervisor WIE Program and Workplace Activity Systems

### Dynamic Nature of Activity Systems

Again, given that the constructs did not change in T2 the dynamism within the WIE and the workplace activity systems remained unchanged from T1.

### Strength of Constructs

The only change to the strength of constructs as mapped onto the WIE and workplace activity systems is the movement of C2 *having strong prioritization/time management skills* from a less consistent to a consistently applied construct.

### Strength of Constructs: Based on Experience Perspective

The constructs were mapped onto the activity systems through the lens of the various experiences the student had, whether: constructivist, critical cultural, psychoanalytical, situative, or enactivist (Table 10).

Table 10. *Case B Supervisor T2: Transformational Learning Elements*

<p style="text-align: center;"><b>Constructivist</b></p> <ul style="list-style-type: none"> <li>• Dealing with a challenging client situation</li> </ul>	<p style="text-align: center;"><b>Critical-cultural</b></p> <ul style="list-style-type: none"> <li>• Appreciating <u>psycho-social and behavioural dimension</u> to the recovery process</li> <li>• Realizing the challenges of running a small business</li> </ul>
<p style="text-align: center;"><b>Psychoanalytical</b></p> <ul style="list-style-type: none"> <li>• Developing self-confidence</li> <li>• Developing agency around knowledge so can apply is appropriately</li> </ul>	<p style="text-align: center;"><b><u>Situative</u></b></p> <ul style="list-style-type: none"> <li>• Starting to identify as part of a caring team</li> <li>• Learning the value of the multi-disciplinary team</li> </ul>

For the constructivist experience, the supervisor has observed the student *dealing with a challenging client situation*. The following constructs are rated as very useful and useful:

- Knowing what is important;
- Able to manage interpersonal relations;
- A multidisciplinary treatment philosophy;
- Mentorship available;

- Client interaction;
- Competency framework;
- Encouragement to grow outside of work term;
- Having a safe team environment to develop confidence; and
- Clear communication and instruction.

The student was observed to have the following critical cultural experiences:

*appreciating the psychosocial and behavioural dimensions to the recovery process and realizing the challenges of running a private business.* With these experiences all of the constructs, with the exception of *realizing they have something of value to offer the team*, are seen as very useful and useful enablers of this transformational learning experience.

As for the psychoanalytical experiences described by the student, *developing self-confidence and developing agency around knowledge so can apply it appropriately*, all of the constructs, with the exception of: *having strong prioritization/time management skills, a multidisciplinary treatment philosophy and socially responsible organization-community engagement* are seen as very useful and useful. These less useful constructs do not seem to be needed to engage the narrative critical self-reflection (Mezirow, 1998) required for deep insights into ones own agency and self-confidence. However, as supported in the narrative, the multidisciplinary team, opportunities to contribute and interactive communications all support these psychoanalytical experiences.

Finally, for the situative experiences observed in the student: *starting to identify as part of the caring team, realizing what different professions bring to care of client and learning the value of the multi-disciplinary team*, all of the constructs, with the exception of: *competency framework, encouragement to grow outside of work term, socially*

*responsible organization-community engagement* and *opportunity to participate in special projects*, are seen as very useful and useful enablers of this transformational learning experience. Situative experiences are those where the student is engaging in legitimate peripheral participation and moving from the periphery of a community of practice towards the centre (Lave & Wenger, 1991). All of the constructs rated not useful were those external to the organization and organizational context. As a result, they would not be enablers of organizational critical self-reflection (Mezirow, 1998) required for the transformative learning about identifying as part of a caring team and understanding the valuable contributions made by different professions.

In T2, the only perspective that changed was the situative perspective with the collapsing of two of the elements into the one: *learning the value of the multi-disciplinary team*. The revised categorization of elements is displayed in the above figure.

### **Connectivity between WIE and Workplace Activity Systems**

The connectivity between the two systems remains the same as in T1 as depicted in the figure in the previous section.

### **Summary of Changes for Case B Supervisor T1 to T2**

In T2 the supervisor did not add any new elements, but did collapse two similar elements into one. He did not add any constructs and made three changes to the T1 ratings. As a result, there were some minor changes to the categorization of elements, the strength of constructs, and the mapping of constructs onto the situative perspective. The connectivity between the two systems remained the same in T2 from T1.

## **Integration**

In discussing the idea of integration, the supervisor made a connection between transformative learning and the student's level of engagement. In his opinion, the more engaged a student was in the workplace, the higher her performance. He thought that transformational learning reinforced engagement and vice-versa, an indication of the intertwining of the learning of the individual and the learning of the system (Tuomi-Gröhn et al., 2003) and the importance of student engagement (Kuh, 2010):

Every time I think back on the exceptional students, the difference has been in their engagement of what we do and how we do it. There is an enthusiasm there for the learning, and a motivation, or initiative to seek out additional opportunities. That translates into what we do and how we do it, and makes that the experience that much better.

NM: Can they have that engagement without having had any transformational learning? Or do the two reinforce each other?

I think they reinforce each other . . . a lot of that engagement is based on utilization of strengths and the opportunity for growth and development piece. I think transformational learning is part of that; it has got to be wrapped up in there somewhere. If you are offering that growth and development piece typically there is higher engagement.

The enablers to transformational learning were seen as playing a role in engagement, and in integrating that learning back into the workplace:

Things like the special projects, offer growth and development. Knowing what is important/expected, and good communication facilitates transformational learning opportunities and thus engagement. So yes, I think engagement is fairly integrated into the whole transformational learning process.

The supervisor acknowledged that future recruitment (Braunstein et al., 2011) was an outcome that his organization values. This quote demonstrates how they lay the foundation for future recruitment by creating a workplace that does not have a transactional orientation (Van Gyn, 1994) but rather values a transformational orientation (Van Gyn & Grove-White, 2011):

I think that is why we do what we do. The company recognizes the value of the employees. It recognizes that if we don't have these opportunities or create these opportunities or these paths for development that we are more likely to lose those employees. Usually after a lot of investment of time, money, and resources have been spent training and developing the staff in their role. There is definitely a return on investment there. Yes.

He also commented on the challenge that providing these enablers and transformative learning experiences brings to the organization:

I guess the only thing we haven't really discussed is the challenge that continuing to provide those transformational learning opportunities presents to the managers, directors, operational leaders. If you don't continue to present those opportunities that has an impact. For some people it can have an impact really quickly and you can see their engagement fall off dramatically. If they visualize their development

path and don't see exciting opportunities for growth, engagement falls off very quickly and now you have an HR problem. There is definitely a challenge in continuing to present new and different learning opportunities.

An additional constraint is time. This supervisor hires students for two, four-month terms to have eight months of time to work with the student and their development:

In an additional four months you often see a good turnaround where they are not so much the student anymore, but actually a contributing member of the team and the service. Definitely, I like the extended work terms for that reason.

Some of these challenges related to time, budget constraints, contractual obligations and having a strong recruitment process, institutional requirements that can limit the capacity to support critical reflection and transformation (Hanson, 2013). The integration is shown in Figure 44.

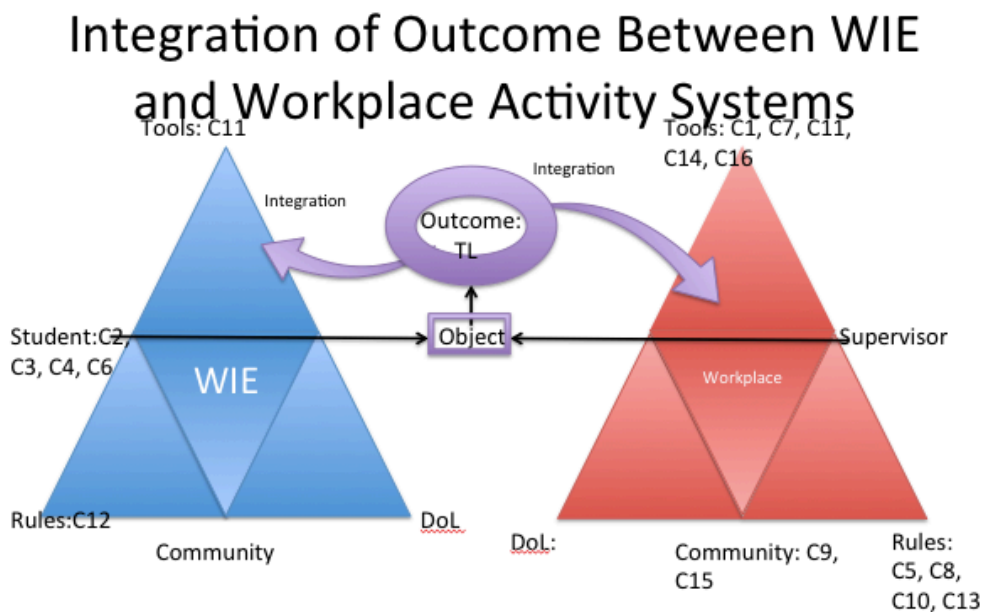


Figure 44. Case B Supervisor Integration of Outcome into WIE and Workplace Systems



### Summary of Findings for Case B: Combined Student and Supervisor

In summary, there are some commonalities with the elements identified as being transformative learning moments from both the supervisor and student's perspective. The first theme was that of the *role that psychosocial and behaviour can play in healing and recovery*, a critical cultural perspective (Fenwick, 2000). The second relates to *the student development of agency around the appropriate application of knowledge* and, in this case, meant the development of her positivity and compassion. As Moon (2004) identified, there is a strong link between experiencing deep, transformative learning and a positive emotional state that this student has experienced and shares with others. The third theme was *identifying as part of the caring team* and, in the student's case, becoming empowered in the process. Here the student is not only seeing herself as part of the community of practice (Lave & Wenger, 1991), but has embraced that within herself and in turn empowers others in an example of co-configuration (Avis, 2009; (Engeström, 1987), 2009). The learning experienced, and observed, in this case goes well beyond what one would expect from a conventional view of WIE where skill development is seen as the key outcome (Sattler et al., 2011).

There are six common themes among the constructs elicited from both the student and supervisor in Case B: *a supportive community of mentoring professional role models, opportunities to interact with clients, holistic team approach, learning opportunities, self-awareness and self-management and personal empowerment and agency*. These common themes demonstrate a shared view of a workplace where the components of a supported, dialectical, mediated and multi-faceted system are engaging in expansive transformation (Avis, 2009). The results of this transformation have led to a growth in the student's self-

formation (Dirkx, 2012) and her capacity for agency and taking her place in this world (Taylor, 2008). These common constructs are mapped on to the WIE and workplace activity systems in Figure 45:

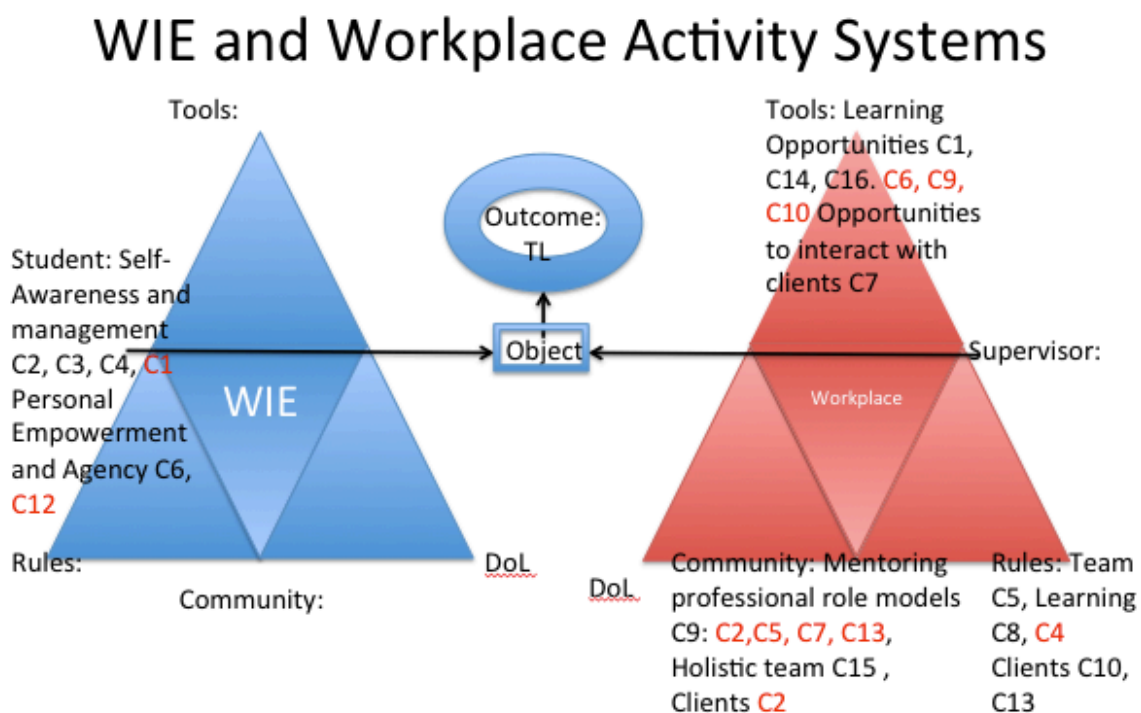


Figure 45. Case B Themes Constructs Mapped Onto Systems

In Case B considering the activity systems of both the WIE program and the workplace, there are some areas of congruence and connectivity. Congruence refers to points where both the student and employer had identified an enabler that existed in both the WIE system and the workplace system and connectivity is where either the student or employer identified an area from one of the activity systems that connects to the same dimension on the other activity system. In the case of congruence, with the dimension of “tools” the WIE activity system and the workplace activity system overlapped. This was expressed in the constructs that the supervisor identified as the *competency framework*

used by the WIE program. The student identified the opportunity for *hands-on learning* afforded to her by her WIE program and lived out on her work term. The overlapping of these two systems around the dimension of “tools” is depicted in Figure 4

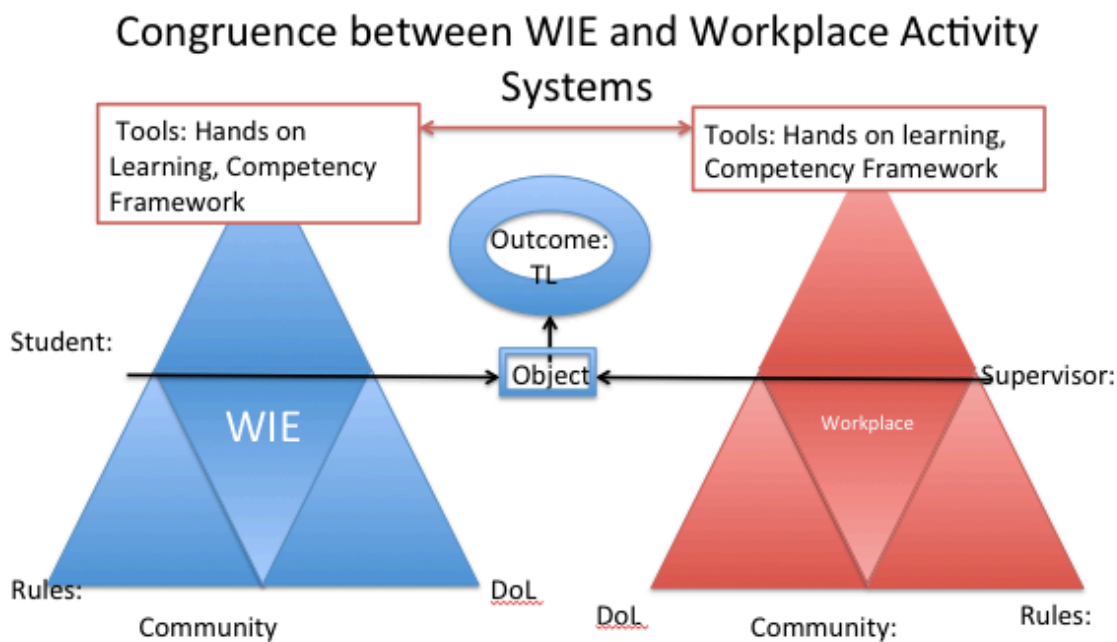


Figure 46. Case B Congruence

The final area of comparison is in how the supervisor and the student viewed the integration of the transformative learning back into the workplace and WIE program. The supervisor identified the connection between a student’s level of engagement and transformative learning. The more opportunities for transformative learning the student had, the more engaged she was and the more she contributed to the workplace. The student identified the constructs of self-awareness and empowerment and the importance of having been part of a team of supportive professionals as helping her integrate her transformative learning into the workplace and having primed her for her return to her academic program. By identifying the need for opportunities to learn and apply learning

and a positive environment both the supervisor and student are attending to necessary conditions for critical reflection leading to transformation (Hanson, 2013).

In summary, there are many areas of overlap between the student's and the supervisor's perceptions both of the transformative learning experienced by the student, and the enablers of that learning. There was congruence in the tools available to both the student and supervisor from the WIE program and workplace that enabled this learning. Finally, both supervisor and student agreed that the transformative learning gained benefitted the workplace and would benefit the WIE academic program once the student returned at the conclusion of her work term. Examining this case through the lens of activity theory revealed that time, the socio-cultural context, and transformative processes appear to be enacted within and between these systems (Keengwe & Jung-Jin, 2013) and allowed for a fulsome view of the process of transformative learning.

### **Case C: Small Not-for-profit Organization**

#### **Context**

Case C takes place in a small not-for-profit organization in Victoria, BC. This organization has been running community-based programs for children, youth and adults since 1977. During the school year they run nutrition programs, preschool, after school, child and youth programs, adult and after school programming. In the summer months they run a series of summer camps for all ages. This small organization received over 40,000 visits to their programs in 2011/12. There are fewer than 15 employees working at the organization and between 10-15 volunteer staff.<sup>2</sup>

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<sup>2</sup> Source: Agency 2011-12 Annual Report

The student is going into her fourth year in the Recreation and Health Education program with a minor in Business. She is beginning her third co-op work term. Her previous two work terms were at summer camps. For this third work term, she has two primary responsibilities: helping to organize a large fundraising event and plan and implement a summer camp for pre-teens.

### **Results from Interviews: Case C Student T1**

#### **Transformative Learning: Elements**

After a discussion with the research where the meaning of transformational learning was clarified, the student was able to provide seven examples. The first: *gaining belief in self that can complete tough challenges* came as a result of being faced with a difficult task and managing well.

I had this “aha” moment because my supervisor knew of my learning objectives and she wanted to help me as much as possible. She put me in the tough conversations with parents and stuff. The first few ones were obviously hard, but after a few I felt that I could do them so easily and I grew so much last summer because of that. That was my biggest.

The second experience was: *ability to perform in public setting* and related to being given a job to phone organizations to ask for donations for a charity event. The office is an open environment, so these phone calls had to be conducted in a public setting with co-workers being able to hear the conversations.

It is tough to ask for money and donations. At first it was hard, everyone in the office was listening to me, so it was nerve-racking. After the first few, I felt

completely confident and today and yesterday I have been making a whole bunch of calls. My “aha” moment with that was, I felt a great big responsibility on my shoulders, everyone was listening. I felt self-conscious, but I realized that I can do it, and push through it.

The third example of transformational learning was: *recognized high level of empathy and inclusiveness in self.*

I’m very intuitive to children that have been left out or are quieter, or if anything is bugging them. I didn’t notice that I was doing it, but my supervisor noticed that I was kind of naturally gravitating towards those children and making sure they were included and we were offering inclusive programs. My supervisor pointed it out to me, and then I suddenly noticed that I was doing that. “Wow, I am doing that.” I think that is really helpful in this field because you are working with different groups of children and you need to be able to give inclusive programs. I saw that I have the ability to do that.

The student identified her fourth transformational learning moment as: *recognized need in self to be well organized to manage job duties.*

I also realized that I’m very organized and I have a need to be organized. I figured it out last summer. I always want to be early for work for some reason. And whenever I got to work, I wanted to try and get as much done as I could before the other people came and the kids came, so I didn’t seem disorganized or anything. So I came to work last year every day early to get all this paperwork done before

everyone else came because it would be chaotic when they kids came. I realized that I'm not OCD, but I like things to be organized.

The fifth example was *developing professionalism* that also came as a result of working with children in a camp setting.

I guess professionalism. I wanted us to be portrayed as a very professional camp and that we had everything tied together before the parents showed up so we weren't struggling to do the paperwork, when they were standing there waiting. I realized I had an innate need for that.

The sixth example related to communication and is labelled: *importance of communication within a team*. This example arose from working within a team environment to run camps and programs:

There was always things going on that we needed to communicate to all of us right away, because plans were always changing. I guess I really realized the importance of communication and how necessary it was for everyone to be on the same page at all times. There were a few days when somebody didn't get to something and it just made it way more chaotic than it needed to be.

Finally, the student identified the seventh example of transformative learning as it pertained to her area of study: *recognition that the recreation and health field is a good fit*.

I guess another "aha" moment was that I realized this is the right field for me, Recreation and Health. I really enjoy it. I love helping people and I really want to

push for healthy, active lifestyles in building communities. It is realizing that this is where I want to be.

### **Transformative Learning Constructs**

The student identified eleven constructs, or enablers, of transformative learning. The first of these is labelled: *supervisor providing appropriate level of challenge*. This enabler came about as a result of being given challenging work by a supervisor, but at a level that the student felt was appropriate:

The first thing that came to mind was my supervisors and fellow employees, they really helped me by pushing me. They knew that I came in with low self-confidence and was quieter. They pushed me to take on those conversations with parents, phone calls, etc.

The second construct is: *co-workers providing trust in ability to do job* and was seen as an enabler in that the trust provided by co-workers resulted in the student feeling supported in her work.

For them, they didn't know my learning objectives, but they saw that I was able to do things and they let me take them on without stepping in my way.

NM: Would that be co-workers providing an appropriate level of challenge? Or co-workers providing support for you to do the job?

I guess co-workers trusting.

NM: Providing trust?



Yes. I guess that helped me feel more supported.

The student was in the habit of keeping a reflective journal that she considered an enabler of her transformative learning, this third construct is labelled: *keeping a reflective journal*.

I kept a journal last summer with everything I did. X (*note: her coordinator*) suggested it to help out the work term report and learning objectives and stuff. I wouldn't say what I did everyday it was more what I felt I learned or something that challenged me or something. Having that journal, I think it helped a lot as well.

Carrying on with the theme of reflection, the student identified the fourth construct of: *writing work term report as a way to reflect* as an enabler.

The work term report, I found it was a positive experience to write it and look through my reflective journal that I kept and reflect on everything that I had done.

The student identified the mid-term assessment conducted with her coordinator and supervisor to also enable transformative learning, creating the fifth construct: *mid term work site visit with coordinator and supervisor*.

The meeting that I had with X (*note: her coordinator*) and my supervisors last summer, at the mid-point, I found that to be really helpful, I was able to openly talk about all the learning that I already had, whereas I hadn't done much of that. To actually think about it, and talk about it and discuss it with them, I found that to be helpful, to wrap my head around everything I had learned.

The student found that establishing learning goals at the beginning of a work term acted as an enabler and sixth construct: *setting learning goals*.

Personally I set out to be more self-confident over the summer. It was a personal goal I had.

NM: Setting those goals up front?

Yes. In addition to the learning goals.

The seventh construct is labelled *being given a high level of responsibility for work* and refers to the relationship between having significant responsibilities and how that enabled transformative learning:

The feeling of responsibility and such. We had to plan all of our camps, contact everyone to make sure that all of the venues that we were going to go to in the summer were available for us, budgeting, doing all that. The nature of all that helped me to believe in myself too.

The eighth construct: *given a lot of trust and freedom from supervisor* brings in the concept of trust again, but this time from the supervisor rather than co-workers. The element of trust provided the student with the freedom to take on her duties, gain confidence and be responsible.

She is giving me my own space to work and everything so I'm not so dependent on her. She is very trusting. I can see that it will be really helpful this summer for me to gain more confidence. There is a lot of responsibility and she is not

checking in on me every day. I need to be able to be on top of everything and managing my tasks.

Being trusted was an important enabler, and so was being respected. This ninth construct is labelled *feeling respected on workplace*. Receiving this respect helped the student feel comfortable in her job and opened the way for transformative learning.

I guess I feel really respected which is really helpful for me to feel comfortable.

For the tenth construct the student referred to her program of study, the Recreation Health Education program. She particularly referenced a course in program planning where she was able to apply the learning from that course into her workplace and that enabled transformative learning experiences. This construct is labelled: *relevant course learning able to apply*.

Definitely what I have learned in my program, in courses, such as the program planning course, I found that to be really useful, last year and this year already, because I have had to do a lot of planning in both jobs. I find myself looking back into what I have learned in that class a lot.

Finally, the student identified the eleventh construct as: *having research skills*.

I guess just from being in school, being able to research things and know how to go about doing all of that has helped with program planning.

## Repertory Grid Results

Figure 47 shows how the student rated each enabler of transformative learning against each identified transformative learning example.

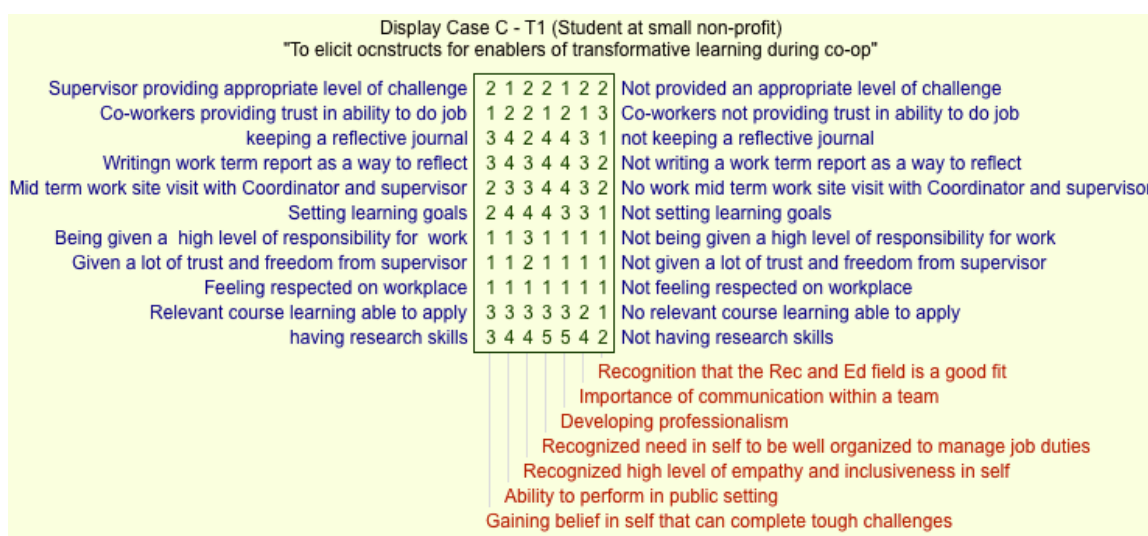


Figure 47. Case C Student T1 RG Results

Table 11 displays the statistical results from this rating of the constructs against the elements.

Table 11. Case C Student T1 Means and Standard Deviations of Constructs

	Standard Deviation= $\leq 1$	Standard Deviation= $> 1$
Mean = 1 to 1.7	Very Useful Enabler— Consistently	Very Useful Enabler—Not as Consistent

	<p>C9. Feeling respected on workplace</p> <p>C8. Given a lot of trust and freedom from supervisor</p> <p>C1. Supervisor providing appropriate level of challenge</p> <p>C2. Co-workers providing trust in ability to do job</p>	<p>C7. Being given a high level of responsibility for work</p>
<b>Mean = 1.8 to 2.5</b>	<b>Useful Enabler—Consistently</b>	<b>Useful Enabler—Not as Consistent</b>
<b>Mean= 2.6 to 5.0</b>	<p><b>Less Useful Enabler—Consistently</b></p> <p>C10. Relevant course learning able to apply</p> <p>C5. Mid term work site visit with coordinator and supervisor</p> <p>C4. Writing work term report as a way to reflect</p> <p>C11. Having research skills</p>	<p><b>Less Useful Enabler—Not as Consistent</b></p> <p>C6. Setting learning goals</p> <p>C3. Keeping a reflective journal</p>
	<b>Standard Deviation= &lt;/=1</b>	<b>Standard Deviation=&gt;1</b>

## Case C Student T2

### Transformative Learning Elements

In the T2 interview, the student confirmed that the transformative learning examples given in T1 were still valid. She also identified five additional transformational learning moments that had been experienced in her current work term.

### Transformative Learning Elements: T2

The first of these is labelled: *recognize that student thrives in a fast paced environment*. The student commented that she had come to realize that she is a fast and efficient worker, and liked a similar pace of work.

I need a fast paced environment. . . . An “aha” moment for me was that I am an efficient worker, and they have all said that. . . . Also tied into that is that I get bored quite easily here, because it is not quick enough for me. I guess I learned that I would like to be in a more fast-paced environment.

The next element: *recognized that can adapt to the pace of environment when needed* related to the requirement that she needed to slow down and match the pace of the workplace.

I have the ability to slow down. I just get frustrated and then realize that it is okay and slow down. Then I’m okay. I can handle myself in a slow-paced environment, but I guess I thrive more in a fast-paced environment.

The third new experience: *developed an appreciation for how all job duties fit into bigger picture* came as a result of being assigned a range of different tasks, being exposed to many different roles and appreciating how all of these components fit together for a fully functioning organization.

Being put into all the jobs so I can have an appreciation to see the bigger picture.

The student's fourth experience: *recognized that have mediation abilities* came about as a result of her handling, rather than avoiding, a number of conflict situations with staff over the term.

There have been times when there is conflict between the leaders. I don't like conflict so I try to stay out of it. But they have all come to realize that I'm a good listener so they all talk to me. I guess I have realized that I'm a good listener and have the ability to mediate people, rather than create conflict or make it worse.

Working through some of these challenging situations resulted in the fifth and final new transformative learning experience: *developed a sense of confidence even in situations that were unnerving*. Over the course of the term the student was placed in unfamiliar situations where she had to interact with customers providing service that she was not familiar with. Even though she felt uncertain, she coped and discovered that her confidence increased and she was able to perform well.

My supervisor told me, "Even if you don't know the answer, fake it until you make it, act confident, and let them know that you will find out the answer. They will trust you and it will be fine. They will be a happy customer leaving the door." So I tried that. It worked. And the customers came back and asked me more

questions. . . . It has been a learning process for me. . . . Develop a sense of confidence, even in situations where I don't feel it.”

### **Transformative Learning Constructs: T2**

In T2, the student identified seven additional enablers of transformative learning. The first of these new constructs is: *access to information about organizational context* that the student considered an enabler as it helped her understand more about the workings and constraints of the organization.

To learn more about the context and how everything runs has helped me feel less frustrated with the slow pace of it all. I understand there is all this background stuff going on. Some jobs can't be fast paced because they have all these steps that need to get done before completion. I guess it has helped me to understand that and adapt to the environment, because I have gained a broader understanding of how everything works.”

The second enabler is labelled: *relevant work experience to apply* in which the student explained that being able to draw upon her previous work experience enabled her to be successful in her tasks allowing for transformative learning:

I used a lot of from past experiences with other jobs, from what I have learned there to help me. I guess I have used what I learned from past jobs and volunteer experiences, that information I have been able to apply it to the tasks I have been given here.

The student was able to gain additional insight, which enabled transformative learning, as she was provided with many opportunities to learn about different roles and



responsibilities within the organization. This enabler is labelled: *exposed to different roles and responsibilities in the organization*.

What I have noticed throughout the summer is that all the bosses have stepped in because sometimes my supervisor didn't have enough tasks for me, so they would give me some of their tasks. I have been able to help out all of the different bosses in each of their different roles. I have been able to learn more about the organization because I have been able to act as a lot of different people, at different times, and learn about what they do.

Not only was she exposed to different roles and responsibilities in the organization, but she was also provided with a broad range of work duties. This enabler: *exposed to wide range of job duties* is explained as being more than seeing what others do, but actually having to perform those duties herself, leading to transformative learning.

Actually physically do it, and learn by doing it. They just give me tasks and I have to go and figure them out. They give me a lot of responsibility with that. That was a big learning moment for me. I wasn't just being told what to do. I had to actually make it happen. Step into their shoes, so to speak.

The fifth new element is: *listening skills and ability to build trust with co-workers* and related to her transformative learning experience of being able to mediate conflict between staff members. If they had not trusted her and if she did not have the requisite listening skills, she would not have been able to move into a mediating role and learn that she was an effective mediator of conflict, which raised her confidence level.

I have realized that I'm a good listener and have the ability to mediate people . . . that has allowed my co-workers feel that they can trust me. That has help me feel more confident in my position here and as a leader with the kids.

The sixth new enabler is: *guidance from supervisor*, which the student explained had been provided to her throughout the term and in a manner that was helpful and enabled her transformative learning.

Guidance from my supervisor. They have given me a lot of guidance over the summer.

The final new enabler is: *meaningful feedback from supervisor and co-workers* and how this feedback helped her gain confidence leading to her transformative learning experiences.

The feedback and support from her and my co-workers gave me the confidence to be confident with my own ideas.

### **Repertory Grid Results: T2**

The student not only added five elements and seven constructs, but in reviewing her rankings made some changes to those values as well. A revised RG display of how this new set of elements and constructs was ranked is shown in Figure 59.



Figure 48. Case C Student T2 Repertory Grid Results

As a result of these changes, new statistical results were calculated, seen in Table 12:

Table 12. Case C Student T2 Means and Standard Deviations of Constructs

	Standard Deviation= $\leq 1$	Standard Deviation= $> 1$
Mean = 1 to 1.7	Very Useful Enabler—  Consistently  C8. Given a lot of trust and freedom from supervisor  C9. Feeling respected on workplace	Very Useful Enabler—Not as Consistent  C7. Being given a high level of responsibility for work
Mean = 1.8 to 2.5	Useful Enabler—Consistently  C1. Supervisor providing appropriate level of challenge  C18. Meaningful feedback from	Useful Enabler—Not as Consistent  C15. Exposed to wide range of job duties

	<p>supervisor and co-workers</p> <p>C17. Guidance from supervisor</p> <p>C13. Relevant work experience to apply</p>	<p>C12. Access to information about organizational context</p> <p>C14. Exposed to different roles and responsibilities in the organization</p> <p>C2. Co-workers providing trust in ability to do job</p>
<b>Mean= 2.6 to 5.0</b>	<p><b>Less Useful Enabler—Consistently</b></p> <p>C4. Writing work term report as a way to reflect</p> <p>C11. Having research skills</p>	<p><b>Less Useful Enabler—Not as Consistent</b></p> <p>C16. Listening skills and ability to build trust with co-workers</p> <p>C5. Mid term work site visit with coordinator and supervisor</p> <p>C10. Relevant course learning able to apply</p> <p>C6. Setting learning goals</p> <p>C3. Keeping a reflective journal</p>
	<b>Standard Deviation= &lt;/=1</b>	<b>Standard Deviation=&gt;1</b>

The focus, or matching between the elements and constructs at T2 can be seen in Figure 49 showing, by the smaller arrows, close matches.



Figure 49. Case C Student T2 Focus of Elements and Constructs

Several elements matched closely together: *recognized need in self to be well organized to manage job duties, developing professionalism and recognize that student thrives in a fast-paced environment*. Why these experiences were matched, and that they should be separate elements was explained by the student:

Those all make sense to me. Thriving in a fast-paced environment means I'm staying organized. I like to get jobs done efficiently, effectively and that ties into the organization, and managing it all, and developing professionalism, because I like to get jobs done to the best of my ability. So that all makes sense to me, tie in.

NM: Do you still think they deserve to be separated out as individual experiences?

Yes, I think so.

The next set of matching elements was: *developed an appreciation for how all job duties fit into the bigger picture* and *recognized that can adapt to the pace of environment when needed*, their alignment was explained by the student:

Because I have had to do all of the different tasks that go along here. That helped me understand why things go slower or faster when they do. It helps me understand why things need to go faster or slower, and then adapt.

The final set of separate, yet aligned, elements made sense to the student:

Importance of communication within a team, and a high level of empathy and inclusiveness and self are connected.

Those connect well.

NM: You see the mediation one clustering in that area too. It is not quite as tight; it is showing up there.

It is interesting. I think those definitely tie in.

NM: And they still warrant to be separated out?

Yes.

The similarity among the constructs: *keeping a reflective journal* and *writing a work term report as a way to reflect* was evident as both are devices to encourage reflection. Being *exposed to different roles and responsibilities in the organization* and *exposed to a wide range of job duties* were similar yet distinct. Finally, the matched set of constructs: *feeling respected on the workplace* and *given a lot of trust and freedom from*

*supervisor* were connected in that the student felt respected when she had been given trust and freedom. Despite the similarities amongst these constructs the student reiterated that they were separate.

NM: But still all warrant being separate as constructs?

I'd say so yes. I feel different things for all of them.

NM: They all played a different role?

Yes.

In summary, when exploring the matches between the elements and constructs the student articulated an underlying rationale for these matches and for keeping them as unique elements and constructs.

### **Narrative Analysis: T1**

By analysing the narrative from the student T1 interviews, and clustering frequently raised concepts, four latent themes emerged: confidence, communication, learning and self-awareness. Confidence was a central theme for this student during her work term:

I went into the summer with low self-confidence. My main goal was to build self-confidence.

Factors that she thought would help her build her confidence were learning to “trust” and “believe” in herself and display this to others, specifically her co-workers and supervisor,

so that they in turn would trust and believe in her, give her responsibilities where she could prove herself and thereby continue to build her confidence.

If given tough responsibilities I trust in myself that I can carry them through, that others can believe in me because I believe in myself I guess . . . I felt self-conscious, but I realized that I can do it, and push through it. It ties along with the self-confidence that I can do what I set my mind to I guess. I shouldn't doubt myself.

She talked about strategies such as being well organized, acting in a professional manner and making confidence an explicit goal for the term.

Personally I set out to be more self-confident over the summer. It was a personal goal I had.

Communication was the second theme:

There were always things going on that we needed to communicate to all of us right away, because plans were always changing. I guess I really realized the importance of communication and how necessary it was for everyone to be on the same page at all times.

The theme of learning encompassed applying her program learning into the workplace and using her research skills.

The final theme of self-awareness included an awareness of working well with children and of her values and interests:



I love helping people and I really want to push for healthy, active lifestyles in building communities.

### **Narrative Analysis: T2**

In the T2 interview, the student spoke about the confidence that she had developed over the course of the term. Some of this was a result of the “trust” she had received from co-workers, “positive feedback” she had received on the job, responsibilities given to her and the advice she received from her supervisor to “fake it till you make it.” As a result, the student felt more confident at the end of the term than when she began:

Now I feel more confident in my ideas that it is going to work out.

The student saw how her confidence level helped her in her current workplace, and that there would be future benefits:

A lot of times they tell me to do something but they don't tell me how or anything. So I need to come up with my own way. I have been able to feel confident in doing that. And taking responsibility and managing the task by myself. That has helped me in this workplace, and will help me in the next workplace as well. Being able to trust in yourself, and manage tasks is an important skill. That helps me in school as well.

The communication theme was expanded in T2 to include the importance of listening as a way to learn about the organization:

You overhear conversations about what is going on in the organization. I feel that by listening to those conversations I have learned a lot about how the organization runs, how managers deal with things that come up. They know that I am there, so it is not a bad thing, but listening to those conversations has helped me to learn about the field, and how the center runs.

The learning the student gained over the course of the work term was further expressed in T2. She was exposed to a vast array of job roles and responsibilities with the expectation that she perform:

They just give me tasks and I have to go and figure them out. They give me a lot of responsibility with that. That was a big learning moment for me. I wasn't just being told what to do. I had to actually make it happen. Step into their shoes, so to speak.

In addition, she articulated the benefits of applying classroom-based learning through hands-on learning:

You do learn a lot in class, but you don't really learn unless you can apply the learning and I think I have been able to do that a lot here and in my other work terms.

In the final theme of self-awareness, the student talked about how the variety of work she had been given helped to further clarify her future career interests, including going into business for herself. She also gained awareness regarding the pace of work that she is most comfortable with, and how to adapt:

I need to take a step back sometimes and slow down to fit within the environment that I'm in . . . I have the ability to slow down. I just get frustrated and then realize that it is okay and slow down. Then I'm okay.

### **Data Interpretation and Discussion: Student Case C T1**

Using Activity theory the student's constructs mapped onto the areas of the triangle as follows and in Figure 50:

1. Tools (the means by which the activity takes place). From the WIE program and workplace, *work term report (C4)*, *mid term work site visit with both coordinator and supervisor (C5)* and *relevant course learning applied on the job (C10)*. From just the workplace: *a high level of responsibility for work (C7)*. From the WIE program: *reflection in learning journal (C3)* and the *setting of learning goals (C6)*;
2. Subject (the student): *research skills (C11)*;
3. Subject (the supervisor): *supervisor giving an appropriate level of challenge (C1)*, *given a lot of trust and freedom from supervisor (C8)*; and
4. Community (socio-cultural environment in which the activity takes place): From the workplace: *co-workers' trust in ability to do the job (C2)* and *feeling respected on the workplace (C9)*.

## WIE and Workplace Activity Systems

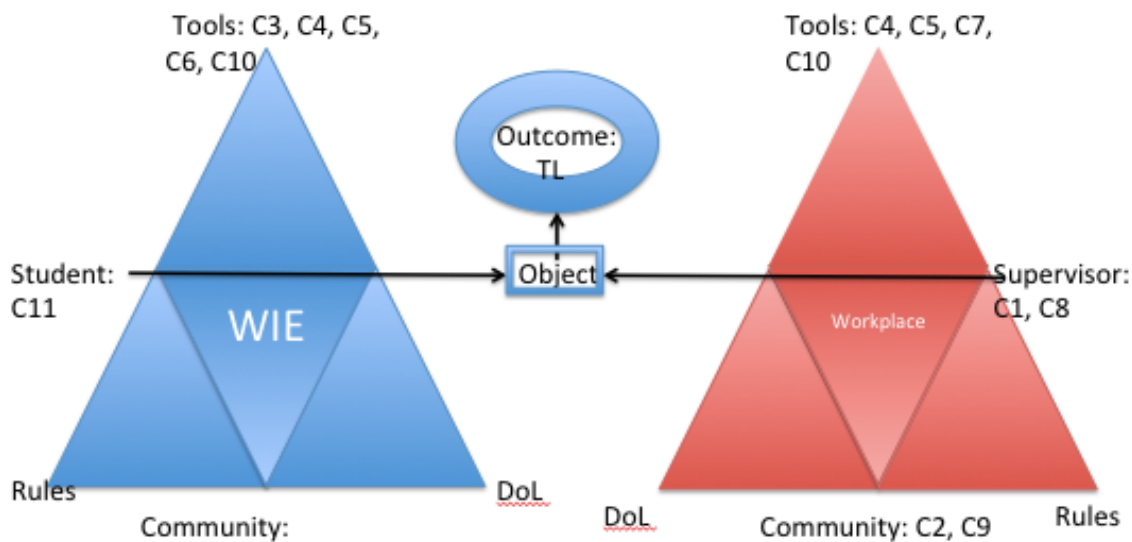


Figure 50. Case C Student T1: Activity System With Construct Mapping

### Dynamic Nature of Activity Systems

With Case C student in T1 the dynamism within the WIE system is found in the Subject-Object-Tools (SOT) sub-triangle as seen in Figure 51.

## Dynamism within WIE Activity System

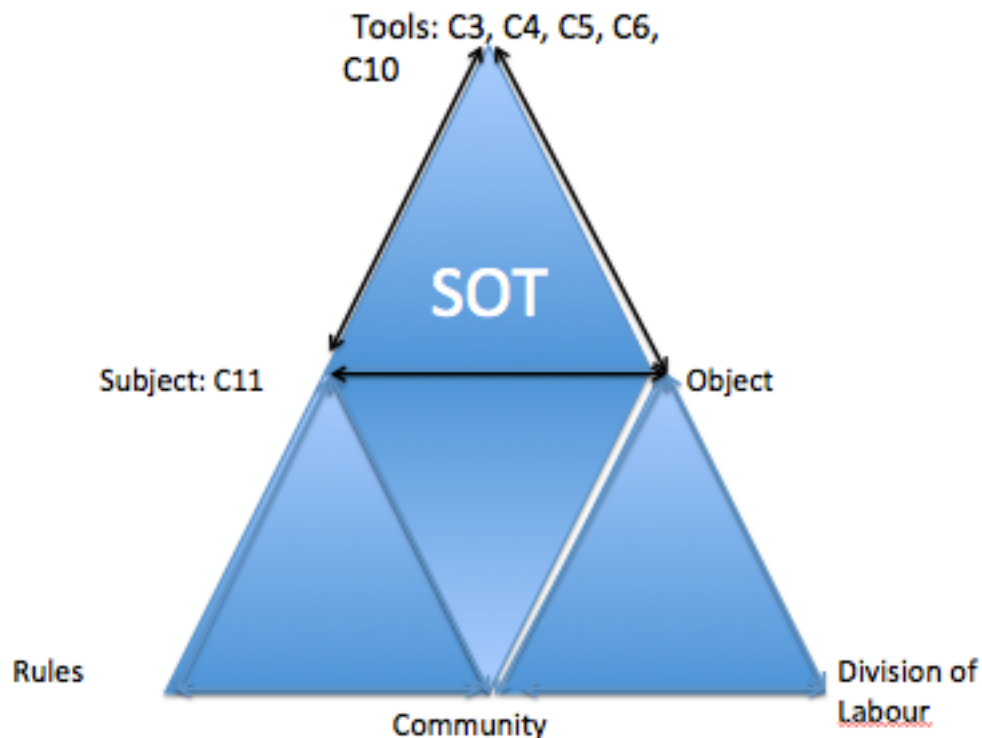


Figure 51. Case C Student T1 Dynamism Within WIE System

The tools that the student had from her WIE program and used in the course of her work terms were: *keeping a reflective journal (C3)*, *writing work term report as a way to reflect (C4)*, *mid-term work site visit with coordinator and supervisor (C5)*, *setting learning goals (C6)*, and *relevant course learning able to apply (C10)*. The first four constructs were all tools that supported the student's critical reflection, which then appear to lead to transformative learning. The mid-term work site visit with her coordinator was described as a dialectical process, mediated by the tools of a work site visit, the learning goals and competency framework used in dialogue with her coordinator, creating a zone of proximal development (Vygotsky, 1986):

I was able to openly talk about all the learning that I already had, whereas I hadn't done much of that. To actually think about it, and talk about it and discuss it with them, I found that to be helpful, to wrap my head around everything I had learned.

Course learning was a tool from her WIE program, and through applying her learning she came to realize its relevance in relation to the work she was assigned to do, through this application she was able to realize transformative learning. The other area of this sub-triangle is the student's *having research skills* that she used in her work, examining questioning and discovering that allowed her transformative learning. The dynamic nature of the workplace system is made evident in Figure 52:

## Dynamism within Workplace Activity

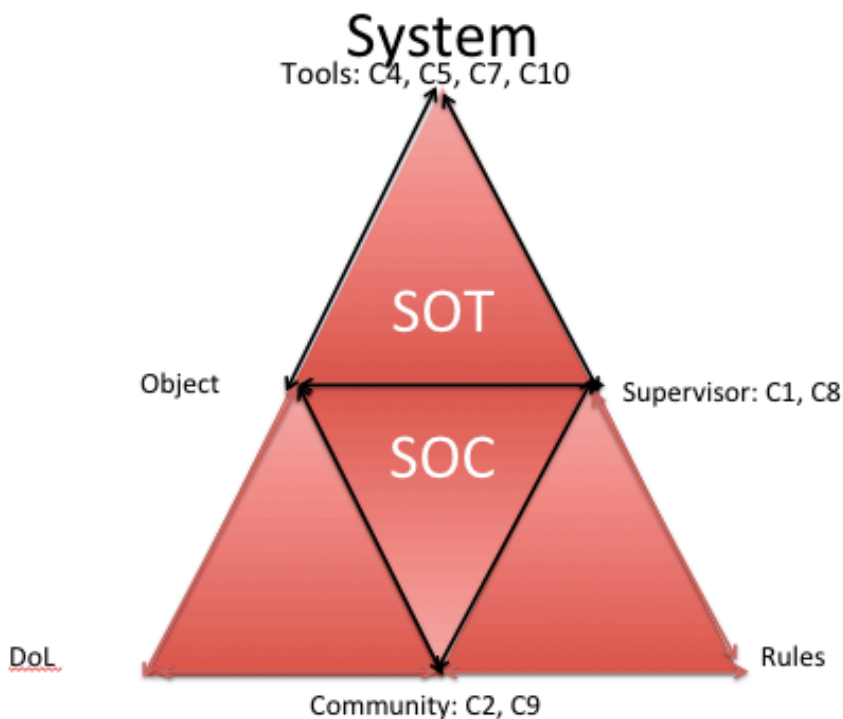


Figure 52. Case C Student T1 Dynamism Within Workplace system

This figure shows that there are two sub-triangle areas of the workplace system that seem to be most dynamic. These are the Subject (supervisor)-Object-Tools (SOT) and Subject (supervisor)-Object-Community (SOC) sub-triangles. The tools of: *writing work term report as a way to reflect (C4)*, *mid-term work site visit with coordinator and supervisor (C5)*, *being given a high level of responsibility for work (C7)*, and *relevant course learning able to apply (C10)* created the conditions for critical reflection that enabled expansive learning (Engeström, 1987) and transformative learning. Writing a work term report, and having a mid-term work site visit with the coordinator and supervisor allowed opportunities for feedback that resulted in supporting the student's critical reflection on her performance; a dialogic, mediated and embedded process (Blackler, 2009). Being afforded a high level of responsibility and having relevant course learning to apply allowed the student to stretch into her role, again allowing for transformative learning. The *supervisor providing appropriate level of challenge (C1)* and being *given a lot of freedom from supervisor (C8)* set the conditions for the type of work the student would be able to work on and the manner in which she could pursue the object. The challenging nature of the work and the freedom allowed for transformative learning.

In the SOC sub-triangle the importance of the community becomes evident: *co-workers providing trust in ability to do job (C2)* and *feeling respected on the workplace (C9)*. The trust and respect provided by co-workers allowed the work assigned by the supervisor to be carried out without any undermining efforts by co-workers who might

not have supported the supervisor's approach if they did not trust and respect the student. The positive and supportive environment within this workplace created the conditions (Hanson, 2013) for critical thinking that enabled transformative learning.

### **Strength of Constructs**

The very useful constructs had mean scores from 1-1.7 and standard deviations less than and equal to 1.0 and they mapped on the system as:

- Subject: Workplace Supervisor: *supervisor providing appropriate level of challenge (C1) and given a lot of trust and freedom from supervisor (C8)*; and
- Community: Workplace *co-workers providing trust in ability to do job (C2) and feeling respected on workplace (C9)*.

One construct had a mean score from 1-1.7 and standard deviation greater than 1.0 and was seen as very useful, but not as consistently so, towards enabling transformative learning across all of the experiences:

- Tools: Workplace “Being given a high level of responsibility for work” (C7);
- None of the student's rating resulted in constructs within the “useful” category. In the “less useful—consistently” category, where the mean was greater than or equal to 2.6, and the standard deviation less than or equal to 1.0 the constructs map out as:
  - Tools: WIE and Workplace: *writing work term report as a way to reflect (C4), mid term work site visit with coordinator and supervisor (C5), relevant course learning able to apply (C10)*; and
  - Subject: Student: *having research skills (C11)*.



The constructs that were seen as less useful, but not as consistent, had mean scores over 2.5 and standard deviations greater than 1.0 were:

- Tools: WIE: *keeping a reflective journal (C3)* and *setting learning goals (C6)*.

In summary, and in line with the latent themes that emerged from the interview narrative, the strongest constructs were those that helped the student with her goal of building confidence. Being given appropriate levels of challenge, being trusted and respected and provided with the freedom to do work with a high level of responsibility all enabled this confidence building that underpinned and grew from her transformative learning.

### **Connectivity Between Systems**

Figure 53 shows the connectivity between the WIE and the workplace activity systems. For the case of this student Case C at T1, the constructs: *writing work term report as a way to reflect (C4)*, *mid term work site visit with coordinator and supervisor (C5)* and *relevant course learning to apply (C10)* connect both the WIE program and the workplace as boundary spanning devices (Avis, 2009; Engeström, 2009). The WIE program requires a work term report and a midterm site visit both of which are based on what is happening on the work term. The WIE academic program has course content and the student is working in a field related to her studies, so the learning she gained in her program is applied in the workplace. These program requirements and course content provide areas of connectivity between the two systems.

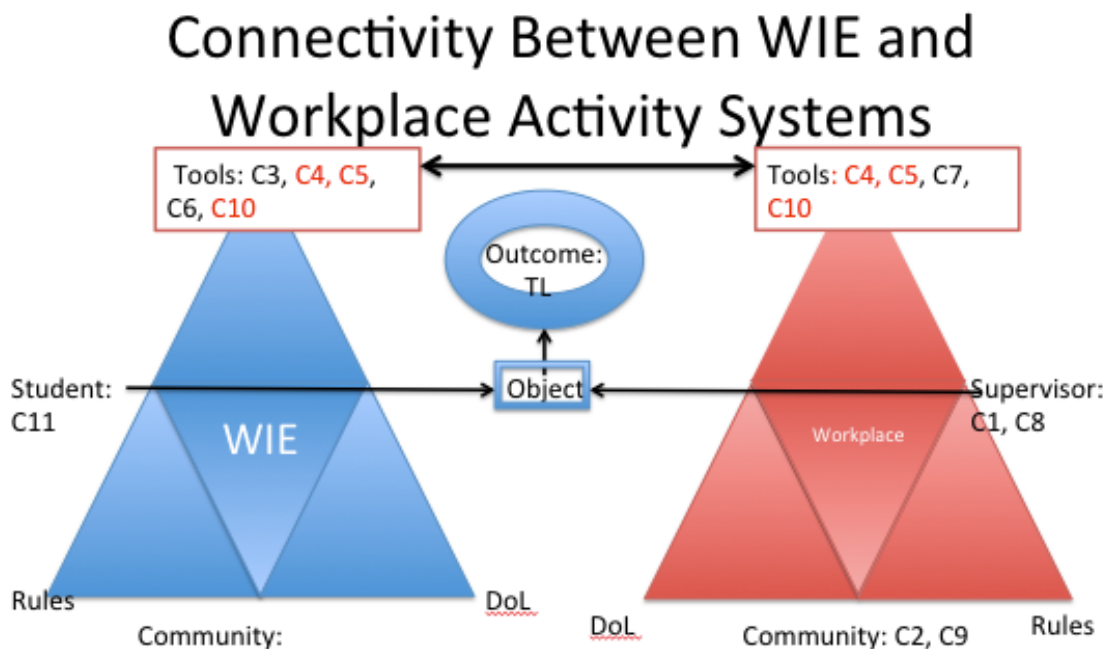


Figure 53. Case C Student T1 Connectivity Between WIE and Workplace Activity Systems

### Data Interpretation and Discussion: Student Case C T2

The additional constructs: *access to information about organizational context* (C12), *relevant work experience to apply* (C13), *exposed to different roles and responsibilities in the organization* (C14), *exposed to wide range of job duties* (C15), *listening skills and ability to build trust with co-workers* (C16), *guidance from supervisor* (C17), *meaningful feedback from supervisor and co-workers* (C18) fit onto various components of both the WIE and workplace Activity Systems. This change is noted in updated Figure 54 of the two WIE and workplace systems below with the new constructs identified in red.

## WIE and Workplace Activity Systems

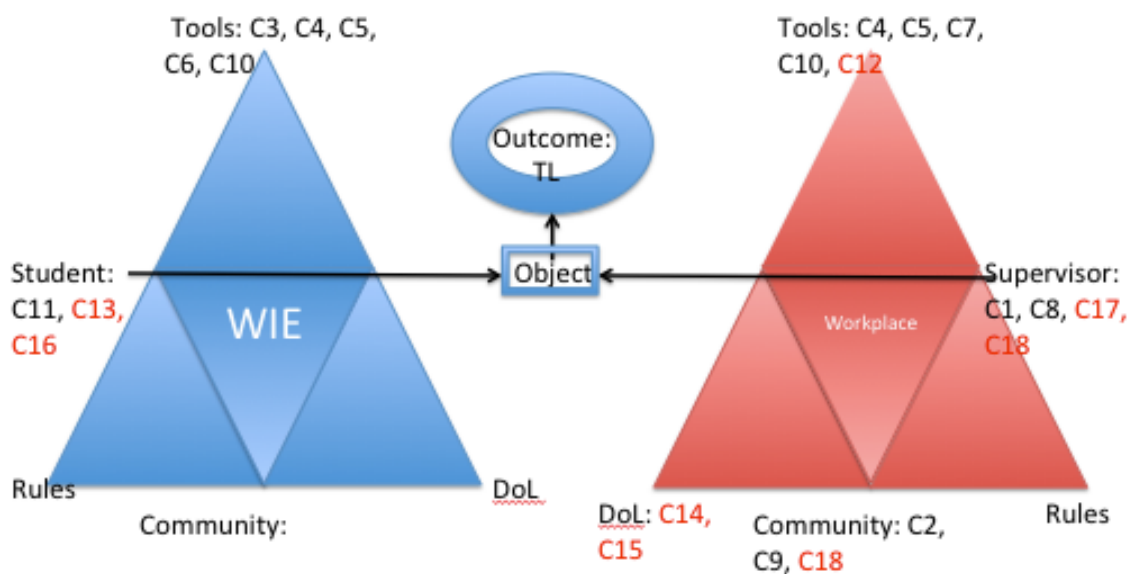


Figure 54. Case C Student T2 Activity Systems With Construct Mapping

### Dynamism in the Activity Systems

The subject student area of the WIE program system is the only area that added constructs, and as a result the change in the dynamism of that system remains located, and more intensified, in the Subject-Object-Tools (SOT) area of the Activity system. The additional constructs of applying relevant work experience and having listening skills and the ability to build trust with co-workers provided her with the capabilities to be more effective with her work. Her experience gave her additional resources to apply to the work, and her ability to build trust with co-workers paved the way for conflict resolution, using mediation. This deepening understanding of herself, what she has to offer and how she can make a difference at work came about due to the dynamic nature

of the system at play. These dynamic forces helped shape her self-formation, an outcome of transformative learning, over the course of the work term. The dynamic nature of the workplace system also changed, both in intensity and complexity of interaction, as can be seen Figure 55:

## Dynamism within Workplace Activity

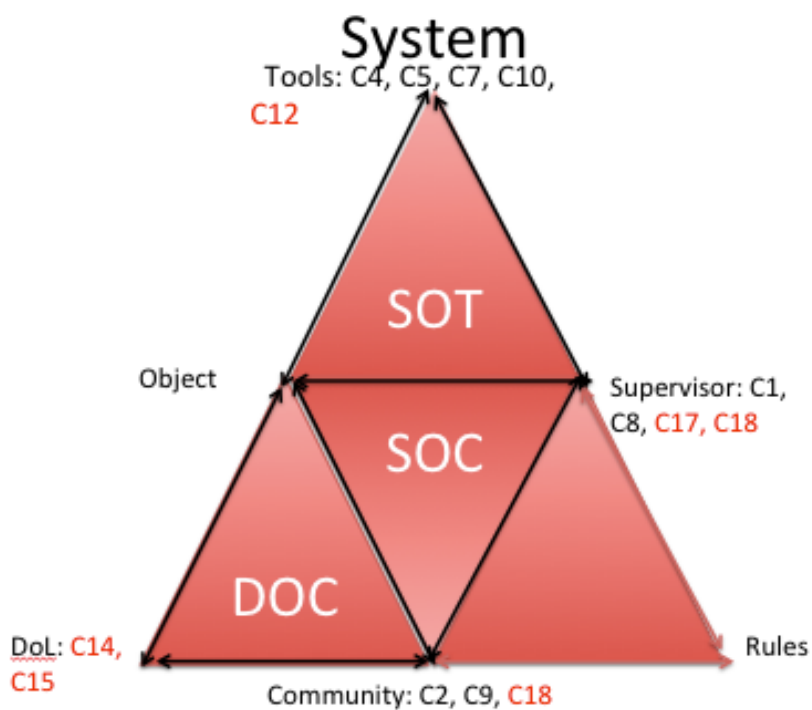


Figure 55. Case C Student T2 Dynamism Within Workplace System

Revised Figure A shows that now three sub-triangle areas of the workplace system are the most dynamic. These are the Subject (supervisor)- Object-Tools (SOT), Subject (supervisor)- Object-Community (SOC), and Division of Labour (DoL)- Object-Community (DOC) sub-triangles. The additional tools of: *access to information about organizational context* provided a useful resource for the student by helping her gain a deeper understanding of the context that enabled her transformative learning. The role of the supervisor is strengthened even more with the additional constructs of: *guidance from*

*supervisor and meaningful feedback from supervisor and co-workers*. This guidance and feedback related to the work being done and enabled transformative learning through a supervisor who provided a transformative orientation in the workplace with supportive guidance, feedback and opportunities for critical discourse and reflection (Van Gyn & Grove-White, 2004).

The community component in the SOC sub-triangle was strengthened in T2 with the additional construct of: *meaningful feedback from supervisor and co-workers*. This meaningful feedback from both co-workers and supervisor reinforced the student's learning and provided a safe, confidence-building environment for her to learn within. This environment enabled critical reflection and her subsequent transformative learning of self-confidence and agency. This dialectic and mediated process is described by the student:

We had a meeting and I came up with a few ideas about how I thought it could go smoother. My supervisor trusted me with them and she said to run with that. It was so smooth and everyone was so happy about how the event went. I guess her supporting me to actually put my ideas into action was very exciting. I felt that I was running the show, it actually worked out and it was a great experience. The feedback and support from her and my co-workers gave me the confidence to be confident with my own ideas.

The dynamism within the workplace system was made more complex with the additional constructs relating to division of labour: *exposed to different roles and responsibilities in the organization* and *exposed to a wide range of job duties*. This activated the Division of Labour-Object-Community (DOC) sub-triangle. Gaining an

understanding of the different roles and job duties within the organization provided the student with a perspective on the system as a whole that she did not have earlier in the term.

I have learned a lot more than I thought I would, rather than just working for (my supervisor). I have been able to work with X, and Y, and learn about everything they have done. Just learn about it, but actually physically do it, and learn by doing it. They just give me tasks and I have to go and figure them out. They give me a lot of responsibility with that. That was a big learning moment for me. I wasn't just being told what to do. I had to actually make it happen. Step into their shoes, so to speak.

She was able to see how these various roles and responsibilities played a part in the overall functioning of the organization. She came to appreciate the various job duties that go into a successful operation and how many pieces need to come together in order for a work project and place to be successful.

It is important for me to learn the tiny jobs all the way up to the big jobs and learn the whole scope of the organization to really be able to understand it.

Being exposed to a number of different managers as well as her supervisor, and the exposure to a wide range of job duties afforded the student with many opportunities for organizational critical self-reflection. This awareness enabled her transformational learning both about her capabilities and the organization as a whole.

## Strength of Constructs

The student revised the ratings she gave her constructs in T1, and as a result, some became more useful in her mind than others. For the very useful category, *given a lot of trust and freedom from supervisor, being given a high level of responsibility for work and feeling respected on the workplace* stayed as very useful enablers, but *supervisor providing appropriate level of challenge* and *co-workers providing trust in ability to do job* were no longer rated as highly. This is likely a demonstration of the student's growth in self-confidence and exposure to other managers.

In T2, the following constructs were rated as “useful”—a category that did not have constructs in T1:

- Subject: workplace supervisor: *supervisor providing appropriate level of challenge (C1), guidance from supervisor (C17), and meaningful feedback from supervisor and co-workers (C18)*; and
- Subject: student: *relevant work experience to apply (C13)*.

The following constructs (scores from 1.8-2.5 and standard deviations greater than 1.0) were seen as useful, but not as consistently applied, towards enabling transformative learning:

- Tools: Workplace: *access to information about organizational context (C12)*;
- Community: Workplace: *co-workers providing trust in ability to do job (C2)*; and
- Division of Labour: Workplace: *exposed to different roles and responsibilities in the organization (C14), and exposed to wide range of job duties (C15)*.

Less useful towards enabling transformative learning across all of the transformative learning experience elements were:

- Subject: Student: *having research skills* (C11); and
- Tools: WIE Program and Workplace: *writing work term report as a way to reflect* (C4).

The constructs that changed in T2, as the standard deviations increased so they were less consistently applied, were:

- Tools: WIE Program and workplace: *mid term work site visit with coordinator and supervisor* (C5) and *relevant course learning to apply* (C10).

Similar less useful construct in T2 were:

- Subject: student: *listening skills and ability to build trust with co-workers* (C16);
- Tools: WIE program and workplace: *mid term work site visit with coordinator and supervisor* (C5) and *relevant course learning to apply* (C10); and
- Tools: WIE program: *keeping a reflective journal* (C3) and *setting learning goals* (C6).

In T2, C16 was added, C5 and C10 entered the category of less useful, and C3 and C6 remained in the category from T1.

### **Strength of Constructs: Based on Experience Perspective**

The student's transformative learning elements can be categorized according to the perspectives outlined by Fenwick (2000), as seen in Table 13. The experiences from T1 are in black font and those from T2 are in red font.



Table 13. *Case C Student T2 Elements*

<p style="text-align: center;"><b>Constructivist</b></p> <ul style="list-style-type: none"> <li>• Recognized need in self to be well organized to manage job duties</li> <li>• Developing professionalism</li> <li>• Recognized that can adapt to the pace of the environment when needed</li> </ul>	<p style="text-align: center;"><b>Critical-cultural</b></p> <ul style="list-style-type: none"> <li>• Importance of communication within a team</li> <li>• Recognized that have mediation abilities</li> </ul>
<p style="text-align: center;"><b>Psychoanalytic</b></p> <ul style="list-style-type: none"> <li>• Gaining belief in self that can complete tough challenges</li> <li>• Ability to perform in public setting</li> <li>• Recognized high level of empathy and inclusiveness in self</li> <li>• Developed a sense of confidence even in situations that were unnerving</li> </ul>	<p style="text-align: center;"><b><u>Situative</u></b></p> <ul style="list-style-type: none"> <li>• Recognition that the Rec and Ed field is a good fit</li> <li>• Recognizes that student thrives in a fast paced environment</li> </ul> <p style="text-align: center;"><b><u>Enactivist</u></b></p> <ul style="list-style-type: none"> <li>• Developed an appreciation for how all job duties fit into bigger picture</li> </ul>

### **Strength of Constructs: Based on Experience Perspective**

For the constructivist experiences, all of the constructs were rated as very useful or useful, including: *access to information about organizational context, exposed to different roles and responsibilities in the organization and exposed to wide range of job duties*. This demonstrated the importance of exposing the student to a broad spectrum of roles, responsibilities and information within the organization that afforded her context upon which to critically reflect.

These constructs demonstrate the positive and supportive environment in which she worked—there was trust, freedom, responsibility and respect. Additionally, she was afforded meaningful opportunities to apply her learning and identify that she needed to be well organized and have professional skills. This provided her with a high level of responsibility and engendered responsible skill development (Cedercreutz & Cates, 2011).

In considering the critical cultural experiences of the student, *importance of communication within a team* and *recognition that have mediation abilities*, the constructs *relevant work experience to apply*, *listening skills and ability to build trust with co-workers* and *meaningful feedback from supervisor and co-workers* became very useful in T2. This demonstrated the student's relational epistemology (Taylor, 2005) in which she learned about, and developed an understanding of herself and her context, through the relationships she had in the workplace. This, in turn, resulted in the growth of her relational agency (Edwards, 2009), an outcome of these transformative learning experiences. Again, the critical reflection occurring as a result of the dialectic and mediated interactions with her co-workers and supervisor resulted in her individual transformation and ability to enact social transformation (Taylor, 2008). The supportive environment and meaningful experiences allowed her to engage in a more systemic critical self-reflection process with her co-workers (Mezirow, 1998) that enabled these transformative learning experiences.

In the psychoanalytical experiences, gaining *belief in self that can compete tough challenges*, *ability to perform in public setting*, *recognized high level of empathy and inclusiveness in self*, and *developed a sense of confidence even in situations that were*

*unnerving* were rated as very useful and useful. In addition to those identified in T1, additional constructs were: *mid term work site visit with coordinator and supervisor, access to information about organizational context, relevant work experience to apply, exposed to different roles and responsibilities in the organization, exposed to wide range of job duties, listening skills and ability to build trust with co-workers, guidance from supervisor and meaningful feedback from supervisor and co-workers.*

The enablers of a supportive, trusting environment and meaningful work allowed for the deep personal critical self-reflection that led to self-formation (Dirkx, 2012) and transformative learning experiences of self-awareness and self-confidence (Postle, 2000). This is an illustration of how a transformation oriented workplace can create the conditions for narrative critical self-reflection for significant self-formation as described by Dirkx (2012).

In T2, and in the situative and enactivist experiences, *recognition that the Recreation and Health field is a good fit, recognize that student thrives in a fast paced environment, and developed an appreciation for how all job duties fit into bigger picture* remained, and the following very useful and useful constructs were added *access to information about organizational context, relevant work experience to apply, exposed to different roles and responsibilities in the organization, exposed to wide range of job duties.*

These constructs enabled organizational critical self-reflection by providing the student with the organizational roles and duties such that she could then consider roles and responsibilities within an organizational context. As a result, at T2 she identified transformative learning regarding the type of work environment that she enjoyed and

demonstrated increased understanding of this community of practice (Lave & Wenger, 1991). In T2, she gained one situative and one enactivist experience, indicating a stronger comfort and identity with this community. One of the outcomes of legitimate peripheral participation (Lave & Wenger, 1991) is that it provides an opportunity for the participants to see themselves as future members of the community of practice.

### **Connectivity Between WIE and Workplace Activity Systems**

The points of connectivity (C4, C5 and C10) remain unchanged in T2 from T1.

### **Integration**

The final component of the T2 interview was to explore the idea of integration of the transformative learning into the workplace and back into the WIE academic program, as depicted in Figure 56. The student identified several contributions she had made, resulting from her transformational learning that she had integrated back into the workplace in her practice. The student talked about how many of her transformational learning experiences resulted in a growth in her confidence. She felt that her increase in confidence allowed her to contribute more to her workplace, and would benefit her achievement in the WIE academic program, in the future. In the following description, the student talks about this connection between self-confidence and initiative.

Feeling confident in myself to run with them. I think that has helped me a lot in the different tasks that I have been given. A lot of times they tell me to do something but they don't tell me how or anything. So I need to come up with my own way. I have been able to feel confident in doing that. And taking responsibility and managing the task by myself. That has helped me in this

workplace, and will help me in the next workplace as well. Being able to trust in yourself, and manage tasks is an important skill. That helps me in school as well.

Continuing to consider her current workplace and how her learning might have been integrated, she commented that she thought the workplace might be different as a result of her contributions, and that those in the workplace might view future students differently. This is a demonstration of how she not only created change for herself, but also social transformation for future students (Merriam et al., 2007):

I hope so. I think the actual position, they have handed me a lot of extra jobs that they haven't handed co-op students before, because I finished them quickly and asked for more. I think maybe that has changed their idea of what students can do.

She commented that all of the constructs or enablers that she had identified would support her integration of the learning both in the workplace and in her WIE academic program:

Yes. A lot of them do, if not all of them. Actually all of them do. Even though back in school it won't be the supervisor providing challenges, it will be the teachers. Co-workers providing support and interest, it will be my peers.

Not only did she state that this integration benefitted her current workplace, but she also remarked that it would benefit future workplaces:

I see a lot of integration with my future workplaces and school. I have had a lot of "aha" moments and transformational learning moments this past summer. A lot of them are to do with my own confidence in myself and that goes with a lot of things, with job duties, customer service, public speaking. That is going to help

me a lot in school, because I will feel more confident in my ability to raise my hand and ask a question, or use my ideas and not feel silly that they are my ideas, or whatever it may be. I know that I am going to use a lot of my learning, because it is a part of me now. Also in future workplaces I will be able to use the things that I have actually learned and done.

What these quotations point to is the power that enablers of transformative learning have in the transformation of future states for the student in the workplace, on return to their studies, and for other students coming into that workplace. As Holman (1997) commented, transformative learning has the capacity to link practical action and future vision. The integration of the transformative learning experiences is displayed in the following figure.

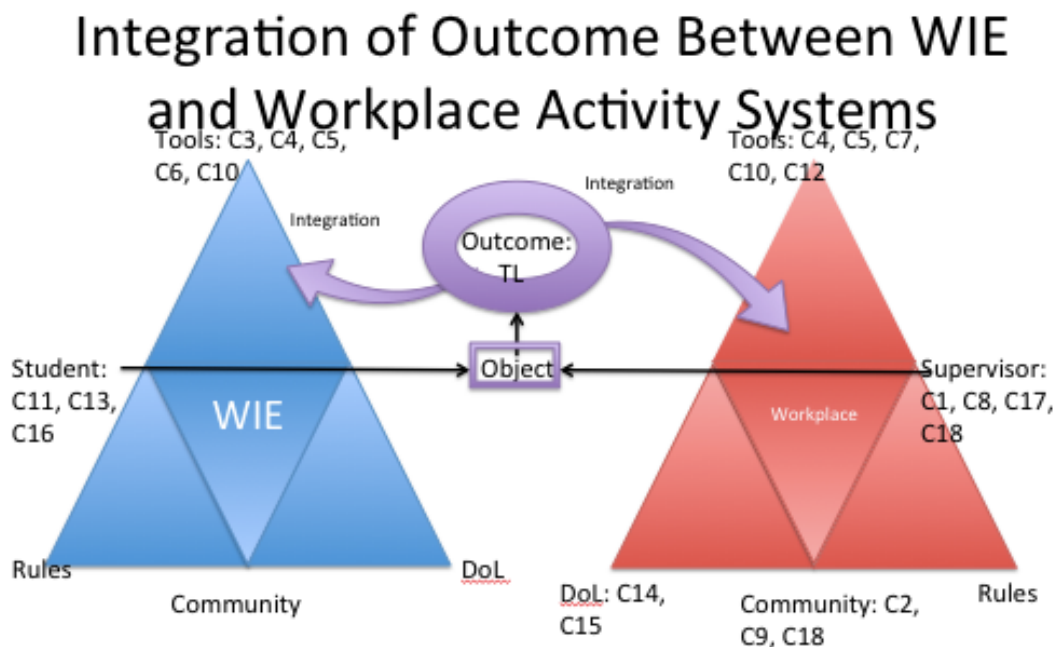


Figure 56. Case C Student Integration

In summary, in T2, the student added five new transformative learning experiences, strengthening the situative and enactivist perspectives, and seven new constructs. She did not change any of the ratings of those constructs identified in T1, but did rate the new constructs in T2. These new ratings changed both the strength and consistency of the constructs. In the category “very useful—consistently” two constructs *supervisor providing appropriate amount of challenge* and *co-workers providing trust in ability to do job* went from being very useful to useful. Six of the new constructs moved into the “useful” area of enabler strength. Three constructs moved from being applied consistently to “not as consistent.”

The change in the internal dynamism of both the WIE academic and workplace Activity systems was affected by the addition of the constructs. The dynamics became more pronounced and, in the case of the workplace, more complex.

The mapping of the construct onto the experiences changed, regardless of whether they were constructivist, critical-cultural, psychoanalytical, and situative or enactivist experiences. The connectivity between the WIE academic and workplace activity systems did not change.

The student exhibited growth in her confidence, an outcome of the supportive environment, transformational workplace and her willingness to “fake it till she made it.” This confidence allowed her to fully experience the workplace, make a valuable contribution and clarify her future goals.

## Results from Interviews: Case C Supervisor T1

### Identifying Transformative Learning: Elements and Constructs

#### Transformative Learning Elements

After clarifying what transformational learning meant, the supervisor provided six examples. The first of these was labelled: *when students take ownership of the project assigned* and was described by the supervisor as that moment when the student realized that the outcome of the project they need to do was up to them. The supervisor took a hands-off approach and let the student come to that realization.

The student doesn't come in at a time where we have a week and a half to train them, and really have them ease into it. They are full on. It is pretty full on from the get go. That is one thing that looks like a transformational learning opportunity, that moment in the first few days when they realize "It is on me, I am going to do it."

When the student started to see situations from the perspective of the community was giving as the second transformational learning example. This element was labelled: *gaining community perspective*. The supervisor described this in the following way:

Most people who work in this field, and again the students, I have seen that happen, they realize that community recreation programming starts with the community and you have to react to that.



Gaining this community perspective usually meant adapting to what the community wanted and needed, which gave rise to the third example: *adapting to changing circumstances*. As the supervisor stated:

I guess that moment when they realize that they need to be flexible, that they are going off the needs of the community, not their own plan. . . . You can have a great plan, but you are working with the public, the community, it might go completely pear shaped on you when you try it.

The fourth example was labelled: *start to identify as part of the team* and refers to the supervisor's observations about the transformation that happens once the student began to see themselves as part of the team. This transformation is seen as valuable in that the student was one of a small staff team making every contribution important. Also the supervisor considered this identification as an ingredient in the student's job satisfaction and subsequent return to the workplace.

There are only five of us who are full-time. If I am the one in the room and somebody knows me as a staff here, they are going to ask me a question about anything, regardless if it is my program or not. That happens with the students too. They are here for the whole summer, people start to recognize them as being behind the front desk, being a staff person and they will start to ask them questions about anything in the centre. That happens as well. That identity is usually as positive experience for the students. They like being part of this, a part of our little community here. We have had a lot of co-op students who have stayed on and continued to work with us after their term was over.

Given the small number of staff, it is sometimes the case that the WIE students were doing tasks that had a larger scope of duties than those offered some of the full-time continuing front-line staff. This sometimes created tensions with these front line co-workers and, as such, the fifth example given was labelled: *navigating co-worker relations when have larger scope than some co-workers*.

The student comes in and they are brand new, and yet the student is given a level of knowledge and a level of training higher than those employees. Sometimes that can be difficult to navigate the relationship with the co-workers.

The final example of transformational learning was labelled: *when students come to realize whether the field is a good fit for them or not*. The supervisor described this example as follows:

I have seen that moment where a student may realize, “I really like this job. This is really where I fit. This is really great. I have made a good choice. I like doing this.” Again, that probably happens towards the end of the term, where they have the realization that this feels right to be working in this kind of environment.

### **Transformative Learning Constructs**

The supervisor identified ten enablers, or constructs, for the transformative learning that she had observed in co-op students. The first one related to supervisory style and was labelled *hands off supervisory style*. The supervisor felt that being a hands-off supervisor afforded the student with more opportunity for transformative learning.

I think part of what enables that is the right supervisory style. Being a bit hands-off and not dictating exactly how they need to do it.

The supervisor also considered the knowledge level of students as being an enabler in that it provided them with the necessary theory that could be applied on the job. This second construct was called *have relevant knowledge to bring to projects*:

Most of the student's education has been helpful. They have taken a planning class, or a project management class, and they start putting the skills they learned on paper, they start using them practically.

The third construct: *regular interaction with community* was seen as an enabler in that having frequent contact with community provided the student with the opportunity to gain a community perspective.

The environment itself is good for that because it is busy, people are coming in and out all the time.

The supervisor considered the short timeline between program planning and implementation as an opportunity for the student to receive instant feedback on their ideas and thus an enabler of their transformative learning. This fourth construct was labelled: *instant feedback*.

There is not a huge lag time as well between planning a program and actually starting to implement it.

The fifth construct: *knowledge and experience of co-workers* and the sixth construct: *knowledge and experience of supervisor* both arose from the supervisor's observation that having the support of co-workers enabled transformative learning:

The experience of those around them. If I see a student really planning something that I know is not going to go over well with the community, based on my own experience, I am not going to stand by and let them totally fail. I guess the knowledge of those around them.

The supervisor identified the small size of her team as being another enabler of transformative learning. This seventh construct, *small size of team*, was seen as enabling in that the WIE student was quickly identified as being an addition to the team and as such could not fade into the background. She was readily noticed by clients of the centre and by co-workers who ensured that she was not overlooked, as might be the case in a larger organization.

I think part of what enables that is the set up of our staff. We are a small staff.

They are fairly quickly identified by clients and by customers as a new face. They don't blend in right away. They can't blend in and get lost because we are a small organization.

The supervisor commented that much of the work of the organization was done in teams. This required the WIE student to work effectively with their co-workers as they were included as team members. This enabler was the eighth construct: *team-based work*.

And just the fact that so much of our work is team-based. They are forced, in a sense, to work with a team on a lot of projects.

Due to the size of the organization, there was a flat hierarchical structure that the supervisor described as follows:

We have a community school coordinator who supervises all of us, there is myself and X as coordinators. We have some admin staff and that is it. Everybody else is frontline staff. Currently there isn't that in between position. But when they come in as a student they do come in and fill that in between position.

The student had a special role to play in the organization, one that lay between the program coordinators and the front-line staff. This afforded the student with opportunities to be involved in activities that were not routinely assigned and as such enabled the student to be exposed to a range of experiences. This ninth construct was labelled: *flat hierarchical structure*.

The organizational structure, as well as the supervisor's desire to provide the student with a fulsome experience, gave rise to the tenth, and final, construct: *provided a range of opportunities*.

If I just said to the student that you get to work on one project this summer, that is not enabling them to get an idea of the whole job.

### **Repertory Grid Results**

Figure 57 shows how the supervisor rated each enabler of transformative learning (the construct) against each identified transformative learning example (the element).

Display Case C - Employer T1 (Small not-for-profit)  
"To elicit constructs on enablers of transformative learning during co-op"

Hands off supervisory style	2 4 3 3 3 4	Hands on supervisory style
Have relevant knowledge to bring to projects	3 4 3 3 3 2	Not having relevant knowledge to bring to projects
Regular interaction with community	4 1 2 2 4 1	No regular interaction with community
Instant feedback	3 1 1 2 4 3	Lagged feedback
Knowledge and experience of co-workers	3 3 2 2 2 3	No Knowledge and experience of co-workers
Knowledge and experience of supervisor	2 2 2 3 2 2	No knowledge and experience of supervisor
Small size of team	1 2 2 1 2 2	Large team size
Team based work	3 3 3 1 2 3	No team based work
Flat hierarchical structure	2 3 4 3 2 4	Highly hierarchical structure
Provided a range of opportunities	3 2 3 3 3 1	Not provided a range of opportunities

When students come to realize whether the field is a good fit for them or not  
 Navigating co-worker relations when have larger scope than some co-workers  
 Start to identify as part of the team  
 Adapting to changing circumstances  
 Gaining Community perspective  
 When students take ownership of the project assigned

Figure 57. Repertory Grid Results: Case C Supervisor T1

Table 14 displays the statistical results from this rating of the constructs against the elements.

Table 14. *Case C Supervisor T1 Means and Standard Deviations of Constructs*

	Standard Deviation= </=1	Standard Deviation=>1
Mean = 1 to 1.7	Very Useful Enabler—  Consistently  C7. Small size of team	Very Useful Enabler—Not  as Consistent
Mean = 1.8 to 2.5	Useful Enabler—Consistently  C6. Knowledge and experience of supervisor  C5. Knowledge and experience of co-workers  C8. Team-based work  C10. Provided a range of	Useful Enabler—Not as  Consistent  C4. Instant feedback  C3. Regular interaction with community

	opportunities	
<b>Mean= 2.6 to 5.0</b>	<b>Less Useful Enabler—Consistently</b> C2. Have relevant knowledge to bring to projects C9. Flat hierarchical structure C1. Hands off supervisory style	<b>Less Useful Enabler—Not as Consistent</b>
	<b>Standard Deviation= &lt;/=1</b>	<b>Standard Deviation=&gt;1</b>

### **Case C Supervisor T2: Identification of Transformative Learning Elements and Constructs**

#### **Transformative Learning Elements**

The supervisor did not have any further elements to add in T2.

#### **Transformative Learning Constructs**

Similarly, the supervisor did not add any new constructs in T2. She changed the ratings for only two constructs and this resulted in a small change to the statistics for the constructs. The revised statistics and standard deviations are shown in Table 15. The effect on the usefulness of the construct is shown in red font for that one construct that changed.

Table 15. *Case C Supervisor T2 Means and Standard Deviations of Constructs*

	<b>Standard Deviation= &lt;/=1</b>	<b>Standard Deviation=&gt;1</b>
<b>Mean = 1 to 1.7</b>	<b>Very Useful Enabler— Consistently</b> C7. Small size of team	<b>Very Useful Enabler—Not as Consistent</b>
<b>Mean = 1.8 to 2.5</b>	<b>Useful Enabler—Consistently</b> C6. Knowledge and experience of supervisor C5. Knowledge and experience of co-workers C8. Team-based work C10. Provided a range of opportunities <b>C4. Instant feedback</b>	<b>Useful Enabler—Not as Consistent</b> C3. Regular interaction with community
<b>Mean= 2.6 to 5.0</b>	<b>Less Useful Enabler—Consistently</b> C2. Have relevant knowledge to bring to projects C9. Flat hierarchical structure C1. Hands-off supervisory style	<b>Less Useful Enabler—Not as Consistent</b>
	<b>Standard Deviation= &lt;/=1</b>	<b>Standard Deviation=&gt;1</b>

The resultant change in the strength of construct categorization was that *instant feedback* (C4) moved from being “useful—not as consistent” to “useful—consistently.”



The focus, or matching between the elements and constructs at T2 can be seen in Figure 58.

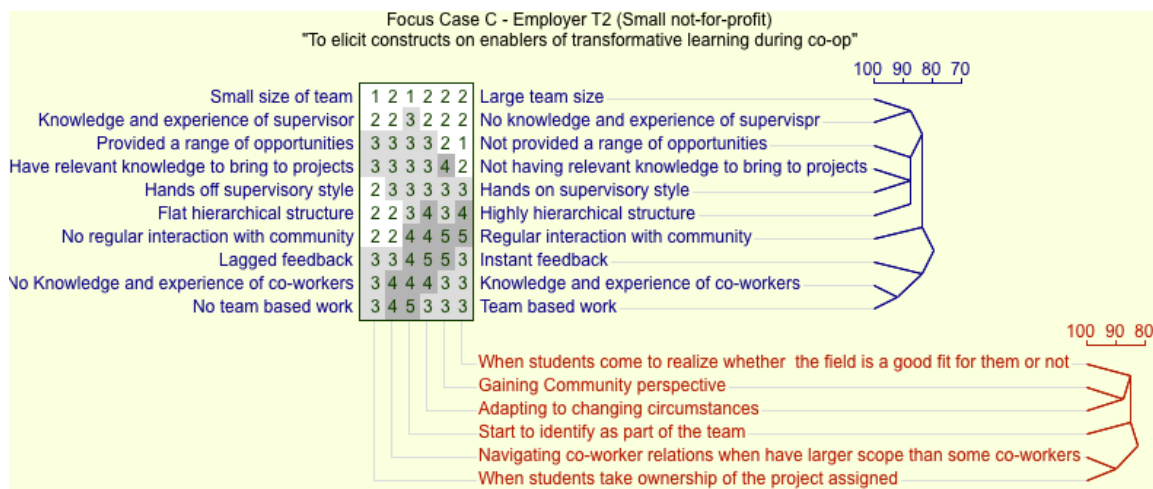


Figure 58. Case C Supervisor T2 Focus of Elements and Constructs

In this case there was one set of elements that were quite closely aligned: two examples, *navigating co-worker relations* and *when students take ownership of the project assigned*. The supervisor explained this matching:

It guess it might be that in both of those learning experiences, to me those are fairly internal things that the student would be dealing with, they maybe both tricky things to navigate, complex. They both involve a maturation of the student.

She confirmed that they were distinct examples of transformative learning:

I think so. The reason being is that one can be very individual. When a student takes ownership of a project assigned, it might be a project that only they themselves are working on, whereas the other one is navigating co-worker

relations so it is very interpersonal between two people. I think they are two different learning experiences.

There were some closely aligned constructs. The first set: *knowledge and experience of co-workers* and *team-based work* were explained as being logical matches by the supervisor:

That makes sense to me. It is team-based, you are working with your co-workers so their knowledge and experience is really going to influence any team-based work you are doing.

The constructs of: *having relevant knowledge to bring to projects* and a *hands off supervisory style* were described as matching by the supervisor as follows:

I guess because if I have a hands off supervisory style as their immediate supervisor, the more relevant knowledge they have, the better they are going to do in the project. The more knowledge they have the less supervision they need from me.

The final set of aligned constructs: *a small size of team* and *knowledge and experience of supervisor* were explained by the supervisor:

I can see the link there, because if it is a small team, the more knowledge and experience your supervisor can provide you the better perhaps, because there are only a few other people to go to. If I wasn't very knowledgeable, there isn't that many other people to get the knowledge from. It is not a big organization, where you can talk to 20 people who do the same job, it is just me.

Despite the alignment with some of the elements and constructs, the supervisor considered them to be distinct and no changes were made.

### **Narrative Analysis: T1**

Three latent themes emerged from an analysis of the supervisor's narrative. These were: supporting student learning, challenges working in a small non-profit and community. The supervisor was committed to identifying and supporting the student's learning objectives.

If I find that the work that we have traditionally provided them is going to give them opportunities to work on those objectives, that is great. If they have an objective that I don't think fits into something that I have already got planned for them, then I will try and find another opportunity for them to complete that objective. That is a big thing for me.

The supervisor provided the student with a great deal of autonomy, allowing for independence and initiative in how they managed their work and learning while on the job:

The student is really given quite a lot of autonomy in how they get the job done. We explain the end result, what needs to happen, by such and such a time, and then you are given some freedom as to how you go about that.

This autonomy was not abandonment, as the supervisor was available to support success:

I am not going to stand by and let them totally fail.

The second theme related to the challenges of working in a small non-profit organization with a flat hierarchical structure. The student is in a very “busy environment,” with a “shared space” that presents many “distractions.” Given the paucity of human resources there is not much time for training and orientation:

The student doesn't come in at a time where we have a week and a half to train them, and really have them ease into it. They are full on. It is pretty full on from the get go.

One of the challenges derives from the student being provided more authority and scope than long-term staff:

They are a brand new person coming in, but they are given a lot more (not authority), the scope of what they are doing and learning is larger than some of the front line staff.

Considering that much of the work is team-based, this poses the potential for interpersonal conflict and requires diplomacy from the student.

And just the fact that so much of our work is team-based. They are forced, in a sense, to work with a team on a lot of projects.

The final theme is about community, both external and internal to the organization. This organization develops and delivers programming in consultation with the local community. As a result, patience and flexibility are required:

Community programming, often it may take a little bit longer, but it is that moment when the student realizes working in a position like this, in recreation

programming with community, you have to be very flexible. That sometimes takes a little bit longer.

This theme of community includes the student identifying with the internal community of the non-profit agency:

That identity is usually as positive experience for the students. They like being part of this, a part of our little community here. We have had a lot of co-op students who have stayed on and continued to work with us after their term was over.

### **Narrative Analysis: T2 Data**

The narrative themes continued in T2. The support of the student's learning was expanded with the acknowledgement that the student was more capable than originally estimated, a very quick study:

I wasn't prepared for her to complete the tasks that I gave her as quickly as she did.

Furthermore, the link to supporting learning and helping the student determine whether this type of work and organization was a good career path was explicated in T2:

That sense of whether this is a good fit for your as a career, and whether to continue on with it. That is one of the reasons why I personally am such an advocate for co-op placements, practicums, work experiences, or anything like that, while you are in school. It can be so different from sitting in the classroom. I think it is very important to have those transformative learning experiences on the

job site, so that you can really then know whether you are pursuing the right career or not.

The implications of supporting this learning on future employee success built upon this theme:

The transformative learning that they have in their co-op term that has made them more successful as an employee here, in the long term.

The benefits to learning of having the student work in a small non-profit setting were described in the T2 narrative, expanding upon that second theme:

I think that is very much what enables a lot of the learning because the student is given more tasks because they are a small team, they are given more opportunity to get involved in everybody's work because it is small. They are asked to fill in for more people, when they are on vacation, we need all hands on deck. I think it really does make a big difference.

In T2 the third latent theme of community included the importance of gaining the community perspective and how that could benefit the student and the workplace:

It is always something that any employee who starts working here, needs to eventually have that learning experience where they start to gain more of a community perspective. When that happens, I think it changes the workplace, because it makes the person who is doing the work sort of feel better and maybe understand better what they are doing.

### Data Interpretation and Discussion: Supervisor Case C T1

The supervisor's constructs map onto the activity system triangles in Figure 59:

1. Tools (the means by which the activity takes place): From the WIE program and workplace: *have relevant knowledge to apply to projects (C2)*. From just the workplace: *instant feedback (C4)* and *provided a range of opportunity (C10)*;
2. Subject (the supervisor): *hands off supervisory style (C1)*, *knowledge and experience of supervisor (C6)*;
3. Rules (the cultural norms, standards, guidelines): From the workplace: *regular interaction with community (C3)* and *team-based work (C8)*;
4. Community (socio-cultural environment in which the activity takes place): From the workplace: *knowledge and experience of co-workers (C5)*; and
5. Division of Labour (Organizational structure): *small size of team (C7)* and *flat hierarchical structure (C9)*.

## WIE and Workplace Activity Systems

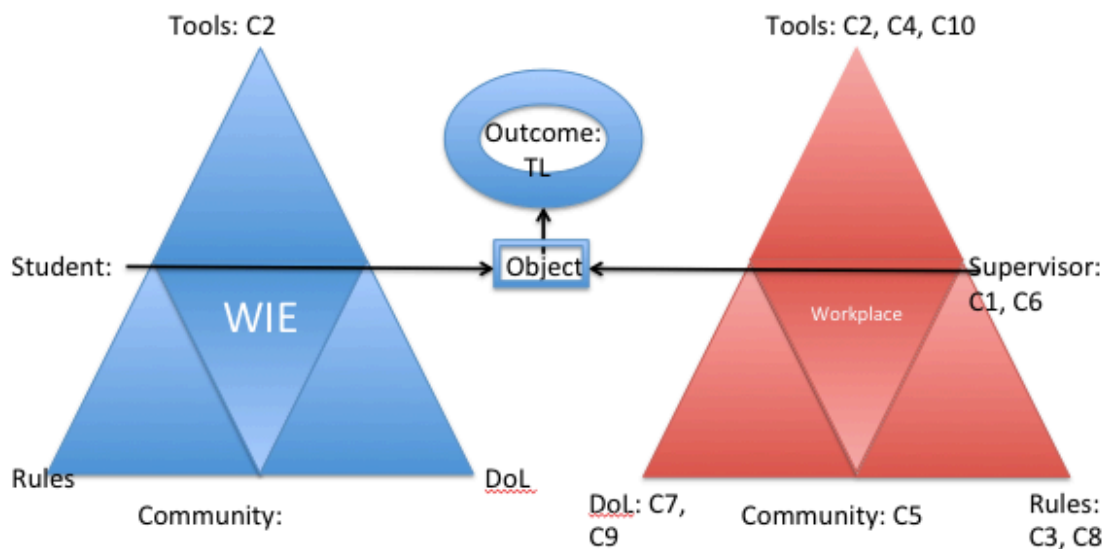


Figure 59. Case C Supervisor T1 Activity Systems With Construct Mapping

### Dynamic Nature of Activity Systems

With Case C supervisor in T1, the dynamism within the WIE system is found in the Subject-Object-Tools (SOT) sub-triangle (Figure 60).



## Dynamism within WIE Activity System

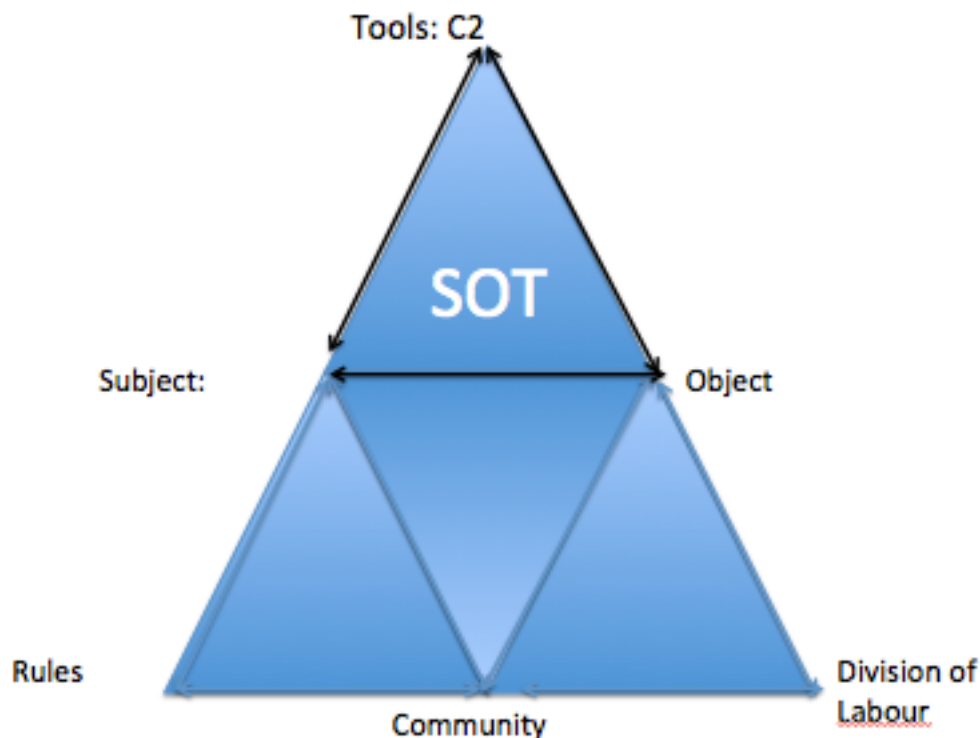


Figure 60. Case C Supervisor T1 Dynamism Within WIE System

The tools that the student had from her WIE program and used in the course of her work terms were: *have relevant knowledge to bring to projects (C2)*. Through applying this knowledge the student came to realize its relevance in relation to the work she was assigned to do. In applying this knowledge she brought questions and contradictions to the work, and applied critical reflection that resulted in expanded learning (Engeström, 1987). The dynamic nature of the workplace system is evident in Figure 61.

## Dynamism within Workplace Activity

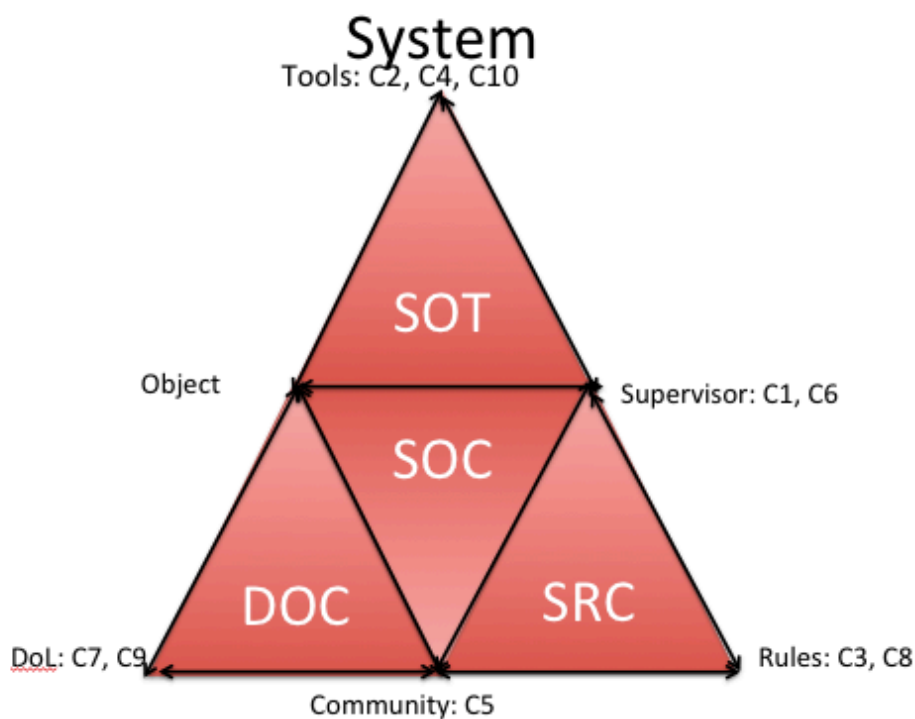


Figure 61. Case C Supervisor T1 Dynamism Within the Workplace System

This figure shows that there are four sub-triangle areas of the workplace system that seem to be most dynamic. These are the Subject (supervisor)-Object-Tools (SOT), Subject (supervisor)-Object-Community (SOC), Subject-Rules-Community (SRC) and Division of Labour-Object-Community (DOC) sub-triangles. In the SOT sub-triangle, the tools of: *have relevant knowledge to bring to projects (C2)*, *instant feedback (C4)* and *provided range of opportunities (C10)* enabled transformative learning through the dynamic relationship these tools had with the supervisor and the work term object. The supervisor, who had a *hands-off supervisory style (C1)* and *knowledge and experience (C6)*, ensured there was a range of opportunities where the student could apply her relevant knowledge and also provided instant feedback on that application of knowledge.

This dynamic of opportunity, application and feedback appears to enable transformative learning.

In the SOC sub-triangle the importance of the community becomes evident: *knowledge and experience of co-workers (C5)*. This knowledge and experience provided more support for the supervisor and acted as a resource that could be brought to bear on the work to be done. The supervisor has confirmed the relational epistemology (Taylor, 2005) that is evident in this case.

The SRC sub-triangle brings to light the interactions that the rules of: *team-based work* and *regular interaction with community* have on the community and the supervisor. This organization operates with a culture that values a team approach to work and regular interaction with the community that they serve. Valuing a team approach allows for the activation of the knowledge and experience that exists among the co-workers, The acknowledgement and inclusion of the community at large ensures that the decisions being made by the supervisor as they relate to the work take into account the needs of the community. The dynamism that occurs between these components of the system enable the transformative learning of *gaining a community perspective* and *start to identify as part of the team*, the latter being an example of relational agency (Edwards, 2009).

The DOC sub-triangle makes evident the division of labour enabler of *flat hierarchical structure (C9)*. A flat hierarchical structure allows for the knowledge of the co-workers to be easily accessible and applicable to the work. This flat structure also meant that the student was placed in a position with larger scope than some of the staff who had been there for a longer time and the tensions that arose led to the transformative learning of *navigating co-worker relations when have larger scope than some co-*

*workers*. These tensions and the nature of the hierarchical structure allowed for the systemic critical self-reflection (Mezirow, 1998) that gave rise to the student's understanding of the power dynamics between established workers and a newcomer who is provided more scope.

### **Strength of Constructs**

Only one construct was seen as consistently very useful towards enabling transformative learning across all of the transformative learning experience elements: *small size of team*.

The enablers seen as consistently useful towards enabling all transformative learning experiences are mapped as:

- Tools: workplace: *provided a range of opportunities* (C10);
- Subject: workplace supervisor: *knowledge and experience of supervisor* (C6);
- Rules: workplace: *team-based work* (C8); and
- Community: workplace: *knowledge and experience of co-workers* (C5).

Useful, but not as consistent enablers were:

- Tools: workplace: *instant feedback* (C4); and
- Rules: workplace: *regular interaction with community* (C3).

Constructs seen as consistent, but less useful towards enabling transformative learning were:

- Tools: WIE program and workplace: *have relevant knowledge to bring to workplace* (C2);
- Subject: supervisor: *hands off supervisory style* (C1); and
- Division of Labour: workplace *flat hierarchical structure* (C9).

## Connectivity Between Systems

Figure 62 represents the connectivity between the WIE and the workplace activity systems. For the Case C supervisor at T1, the construct: *having relevant knowledge to bring to projects (C2)* connects both the WIE program and the workplace as a boundary-spanning device (Engeström, 2009). The WIE academic program has course content and the student is working in a field related to her studies, so the learning she gained in her program is applied in the workplace.

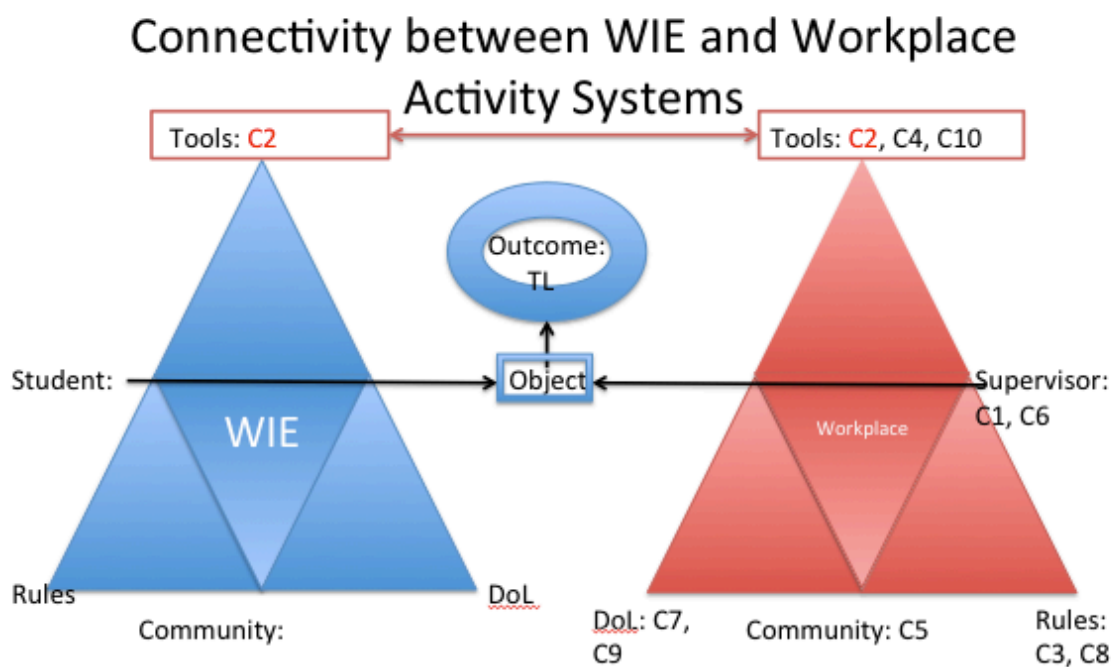


Figure 62. Case C Supervisor T1 Connectivity Between WIE and Workplace Systems

**Data Interpretation and Discussion: Supervisor Case C T2**

Given that the constructs remained the same in T2, the WIE academic program and workplace activity systems remained unchanged in T2.

**Dynamic Nature of Activity Systems**

Again, given that the constructs did not change in T2, the dynamism within the WIE academic and the workplace activity systems remained unchanged from T1.

**Strength of Constructs**

The only change to the strength of constructs, as mapped onto the WIE and workplace activity systems, is the movement of *instant feedback* from a less consistent to a consistently applied construct.

**Strength of Constructs: Mapped onto Perspectives**

Referring to Fenwick (2000) perspectives, the supervisor's elements are categorized in Table 16.

Table 16. *Case C Supervisor Elements*

<p style="text-align: center;"><b>Constructivist</b></p> <ul style="list-style-type: none"> <li>• Adapting to changing circumstances</li> </ul>	<p style="text-align: center;"><b>Critical-cultural</b></p> <ul style="list-style-type: none"> <li>• Gaining community perspective</li> <li>• Navigating co-worker relations when have larger scope than some co-workers</li> </ul>
<p style="text-align: center;"><b>Psychoanalytic</b></p> <ul style="list-style-type: none"> <li>• When students take ownership of the project assigned</li> </ul>	<p style="text-align: center;"><b><u>Situative</u></b></p> <ul style="list-style-type: none"> <li>• Start to identify as part of the team</li> <li>• When students come to realize whether the field is a good fit or not</li> </ul>

For the constructivist experience that the supervisor observed in the student, *adapting to changing circumstances*, the constructs rated as very useful and useful were:

- Regular interaction with community;
- Instant feedback;
- Knowledge and experience of co-workers;
- Knowledge and experience of supervisor; and
- Small size of team.

With the critical cultural experiences, *gaining community perspective* and *navigating co-worker relations when have larger scope than some co-workers* all of the enablers are

rated as very useful and useful with the exception of *hands-off supervisory style* and *have relevant knowledge to bring to projects*. The other constructs all related to the team, the community, feedback and opportunities suggesting that there was a supportive and dynamic environment for the critical reflection that is required for these transformative learning experiences.

For the psychoanalytical experience labelled *when students take ownership of project assigned*, the enablers rated as very useful and useful were:

- Hands-off supervisory style;
- Knowledge and experience of supervisor;
- Small size of team; and
- Flat hierarchical structure.

This demonstrates that the supervisor understood that the freedom for discovery she gave the student was provided in an environment of support. This combination of institutional requirements and supportive environment allowed the student to take ownership of a project and transform both herself and the workplace, as a result.

For the situative experiences, *start to identify as part of the team* and *when students come to realize whether the field is a good fit for them or not*, all of the enablers were rated as very useful and useful with the exception of *hands-off supervisory style* and *flat hierarchical structure*. This points again to the importance of relational epistemology and agency in this case.

### **Connectivity between WIE and Workplace Activity Systems**

The connectivity between the two systems remained the same as in T1:



### **Summary of Changes for Case C Supervisor T1 to T2**

In T2 the supervisor did not add any new elements or constructs and made two changes to the T1 ratings. As a result, there were some minor changes to the categorization of elements and the strength of constructs. The connectivity between the two systems remained the same in T2 as T1.

### **Integration**

In discussing the idea of integration and how that related to the student's transformative learning experiences, the supervisor made a connection between transformative learning and the future success of the student as an employee of the organization:

It is helpful because we have had co-op students who have worked here for their co-op and then stayed on as employees after. I think it is good in a way for the students to do that, because in our experience, those students who have stayed on I think are some of our stronger employees. I have never thought about it in that way before, but perhaps it is the transformative learning that they have in their co-op term that has made them more successful as an employee here, in the long term.

She described that one of the ways these students were successful employees was in their intentionality around learning:

The students come in with totally different set of goals and objectives, they have to actually formulate things that they want to learn, things that they want to

achieve and experience throughout their work term here. I think they are more intentional, and then maybe that just carries through the rest of their work.

The supervisor gave an example of how the transformative learning of *gaining a community perspective* obtained by the student was integrated back into the workplace and created change:

I would say that it does. It is always something that any employee who starts working here, needs to eventually have that learning experience where they start to gain more of a community perspective. When that happens, I think it changes the workplace, because it makes the person who is doing the work sort of feel better and maybe understand better what they are doing. . . . I think the perspective shift helps the employee or the student understand their job better and do their job better. So it can change the whole vibe of the workplace.

The supervisor commented on how the transformative learning example of *when student realize whether field is a good fit for them or not* would be then integrated into the student's subsequent WIE program:

Maybe one of the best informative learning experience that can come out of that, that sense of whether this is a good fit for you as a career, and whether to continue on with it. That is one of the reasons why I personally am such an advocate for co-op placements, practicums, work experiences, or anything like that, while you are in school. It can be so different from sitting in the classroom. I think it is very important to have those transformative learning experiences on the job site, so that you can really then know whether you are pursuing the right career or not. I think

that what we try to do here is really get that, or facilitate that learning experience so that people can go out of here saying “This is good” or “No way, I’m switching.” Both are good outcomes in the end because at least you have learned something.

The integration back into both the WIE academic setting and workplace systems is depicted in Figure 63.

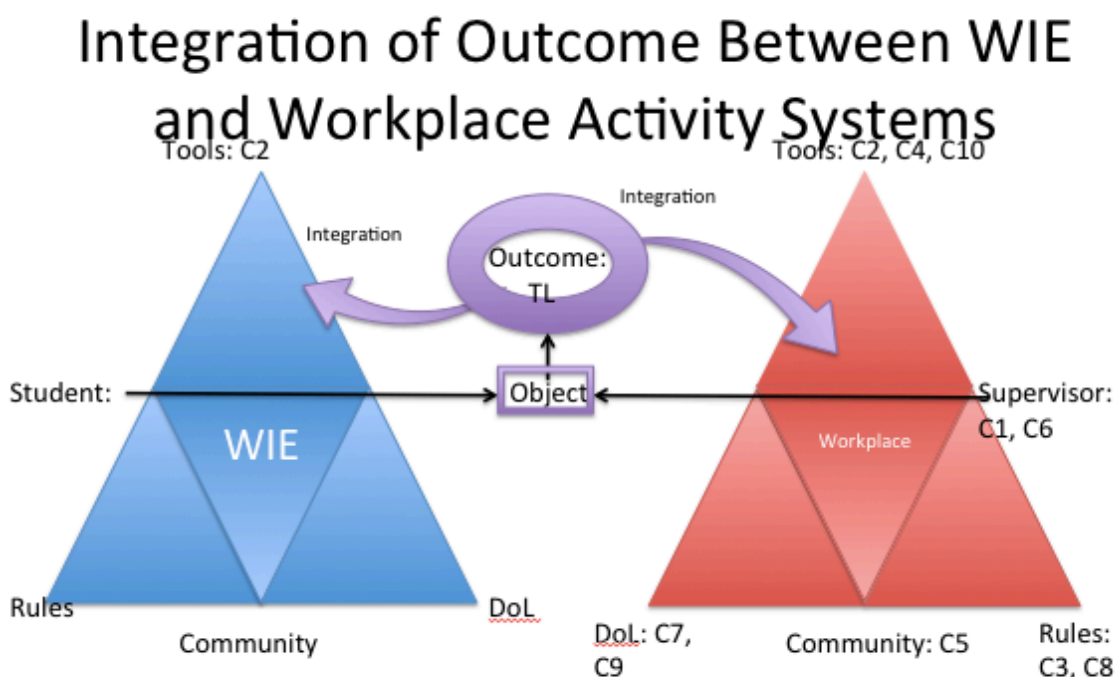


Figure 63. Case C Supervisor Integration

### Summary of Findings for Case C: Combined Student and Supervisor

In summary, there are some commonalities in the elements identified as being transformative learning moments from both the supervisor and student’s perspective. The first theme was that of the *ability of the student to adapt to change*. The second relates to

the student navigating co-worker relations. The third theme involved *realizing that the field of study is a good fit*.

There are six common themes among the constructs elicited from both the student and supervisor in Case C. The first theme is *autonomy* and encompasses the supervisor's hands-off style and the freedom that the student expressed in doing her work. The second theme is *application of knowledge* that includes both course and work experience knowledge. The third theme is *feedback* with the feedback being provided on an ongoing basis as well as part of the assessment and reflection process. The fourth theme is: *knowledge and experience of supervisor and co-workers* that was acknowledged by both supervisor and student. The fifth theme is: *team-based organizational structure* that enabled the student to be involved in a range of roles. The sixth, and final, theme is *range of opportunities*.

These common constructs can be mapped on to the WIE academic program and workplace activity systems, shown in Figure 64.

## WIE and Workplace Activity Systems

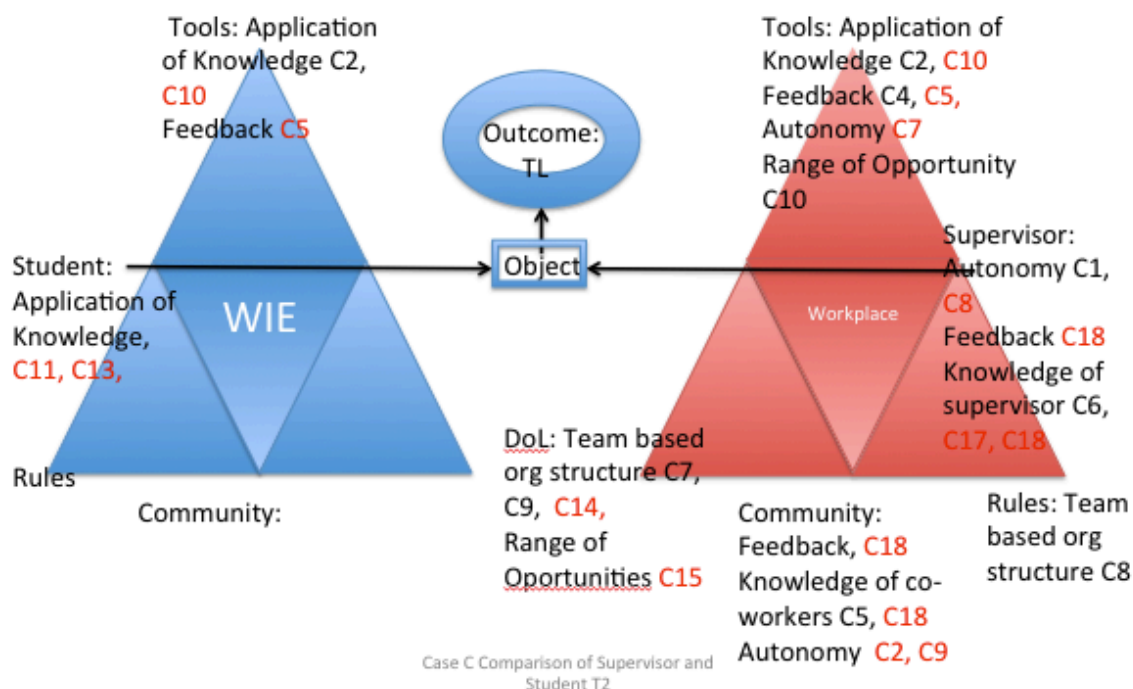


Figure 64. Case C Comparison of Common Constructs Mapped Onto Activity Systems

In Case C, considering the activity systems of both the WIE academic program and the workplace, there are some areas of congruence and connectivity seen in Figure 65. Congruence is identified as points where both the student and employer had specified an enabler that existed in both the WIE academic and the workplace systems and connectivity occurs when either the student or employer identified an area from one of the activity systems that connects to the same dimension on the other activity system. In the case of congruence, the dimension of “tools” the WIE academic system and the workplace activity system overlapped. This was expressed in the constructs that the supervisor identified as the relevant knowledge the student had to apply. The student identified her relevant course learning as well that she could apply in the workplace.

Given that both student and supervisor identified this tool, the boundary-spanning of relevant course learning is high. The overlapping of these two systems around the dimension of tools is depicted by the following Figure 65.

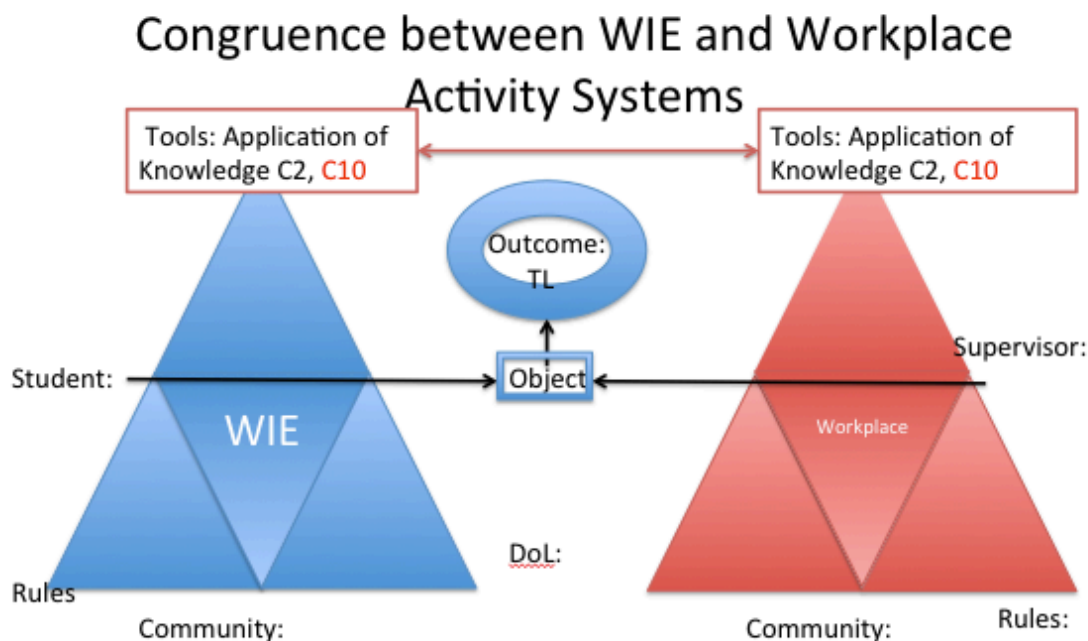


Figure 65. Case C Congruence

The final area of comparison is in the way in which the supervisor and the student viewed the integration of the transformative learning back into the workplace and WIE academic program. The supervisor identified the connection between the student's transformative learning and her effectiveness as a future employee. This speaks to the future recruitment potential for this student as a result of her transformative learning. Supporting a student during the work term so that they are enabled to have transformative learning would clearly benefit the workplace in the future if they were successful in recruiting that student. The more opportunities for transformative learning the student had, the more she grew in the workplace, and more effectively contributed to the

workplace. The student identified the constructs that related to autonomy and helped her gain confidence that would benefit her return to school. Being provided with a range of opportunities enabled her to learn about a wide variety of jobs, but also provided the workplace with the chance to see how capable a student could be which might change how they utilize students in the future. Finally, she commented on her plans to apply the knowledge she had gained as a result of the work term back into her studies upon her return to school.

In summary, there are many areas of overlap between the student's and the supervisor's perceptions, both of the transformative learning experienced by the student, and the enablers of that learning. There was congruence in the tools available to both the student and supervisor from the WIE academic program and workplace that enabled this learning. Finally, both supervisor and student agreed that the transformative learning gained benefitted the workplace and would benefit the WIE academic program, once the student returned at the conclusion of her work term.

### **Case D: Large Public Organization**

#### **Context**

Case D takes place in a large publically funded healthcare organization located in Victoria, BC. The overall organization is responsible for providing a full range of health services across Vancouver Island including hospitals, nursing homes, rehabilitation facilities, public and community health. In total there are over 18,000 employees. The student was working for the health care unit; one of a number of units in the organization, and this particular unit offers rehabilitation services to children and families. During the

summer work term, the student worked in the school age and clinic program that offers summer camps to school age children, some with support needs and some without.

The student in Case D is entering his fourth and final year in the BA Recreation and Health Education (RHED) program. He has completed two work terms, one with a local not-for profit organization that supports active living for people with disabilities and one with a large crown corporation.

The supervisor is an Occupational Therapist with thirty years experience supervising Occupational Therapy practica students. For the previous eight years she has also supervised students from a range of programs who work in the summer camp program.

### **Results from Interviews: Case D Student T1**

#### **Transformative Learning Elements**

The student was asked to describe what transformative learning meant to him, he provided the following description:

To me it means coming to the realization that you have learned something. It doesn't have to be something major, but something that you have learned that is going to help you progress in your future development and something that really sticks out to you, that you can and should be proud of.

The student was able to identify seven transformational learning experiences. The first of this was labelled: *having something to offer team to help members progress*. The student had this experience on a work term where he introduced a technique he had used in the past for setting goals to his new team.



That was a really an “aha” moment for me in a sense that I do have something to offer them, as opposed to finishing the week of training and learning how they do their duties, learning what the job was about, but I actually had something to offer them in a way to progress the team. I think that definitely gave me more confidence knowing that I was an integral part of that team.

His second transformational learning experience occurred during a work term with an agency for with children with disabilities. During that time, he realized that these children had particular needs that required an individualized approach to ensure successful integration. He also came to realize that this approach might be quite different from what he originally expected of the children. This realization led to the second element, labelled: *realizing that children have their own individual way to integrate not based on student's expectations.*

Understanding that each child had individual needs led to the third transformational experience labelled: *identifying key outcome was individual children's happiness.* The student determined that success for integration wasn't to be based on how well the child was completing an activity, or participating with others or some other measure, but rather that the child was happy.

I came to the realization that I am going to do everything I can do to have the child integrated and have them around the children as much as I can, doing whatever activity they are doing, but at the same time, making sure they are happy and not necessarily pushing them and forcing them to act or behave or do an activity in a certain way, just because all the other children are.

The fourth transformational learning experience related to the student's working environment. He realized after several days working in his office that he was not suited to that type of work environment:

That was the first job that I had where I have sat in an office and sat in front of a computer for a long period of time like that. An "aha" moment for myself, personally, was just seeing that that is not something that I personally enjoy, not something that I personally want to do in the future. Whereas, going out into the community and interacting with people, talking with customers and being outside and being active is much more important.

This element was labelled: *realizing that not suited to working in an office environment.*

The fifth element, labelled: *realizing that actions and role had big consequences for clients* resulted from the student's work with children with disabilities, and being a significant caregiver for a week.

This is on me, I'm responsible for this child. Having that level of responsibility was a great learning experience, but it wasn't necessarily something that I thought of at the beginning either. Coming to that realization that it was something very important, that my actions, or omissions could potentially make a big difference to the child that I am supporting and also the people around the camp.

The sixth element: *the power of networking and to engage when the opportunity arises* was the result of the student's work term with a large crown corporation that offered opportunities to network with senior management during training. The student

observed others networking and how that was a beneficial way to learn about the organization, meet influencers, and become introduced.

Yes, the power of networking and knowing that this opportunity might not come again so you have to put yourself out there.

NM: When the opportunity arises go for it.

Yes, go for it and put yourself out there. Even if you are not comfortable in doing it, what is the worst that can happen? You may not have that opportunity again.

The final element of transformational learning was labelled: *identified the desire and internal motivation to perform at the best level possible*. The student came to this understanding after having experienced several different workplaces in which fellow staff were not always doing their best or acting as professionally as he expected. This observation made the student realize that he wanted to be different.

The learning for me was that I want to be different, I do want to strive to be excellent in all the areas that I can. I thought that was an expectation at that point, but it was obviously not. Because of that I have become more aware of that in other settings too.

### **Transformative Learning Constructs**

The student identified fifteen constructs, or enablers of the transformative learning. The first of these was having *technical knowledge*. The student explained that having this knowledge provided him with the basis for *having self-confidence* that was seen as the second enabler of transformative learning.

Near the beginning of both work experiences, I was trying to be so in tune with learning the technical expertise on the job and learning how things needed to be done. I'm of the belief that you do need to learn that technical expertise before you gain that confidence. I think the confidence is one of the biggest things that does enable the learning.

The third and fourth enablers were: *applying problem-solving* and *applying critical thinking*. The student considered these to follow from having the technical expertise that built self-confidence, thereby setting conditions for problem-solving and critical thinking that enabled transformative learning.

I find that with my experience, the first two weeks you kind of have tunnel vision and you are just focused on making sure that you are doing what you are supposed to be doing and making sure that you are doing it in the right way. Whereas, you are not really critically thinking about how things can be done differently, or how things could more effectively be improved within that experience. The major thing is getting over that hurdle that you are not just a puppy following the leader. That is definitely a part of it, but at the same time you do have something to add to that experience, but in order to do that you need the confidence to do it.

The student described the fifth enabler as: *influence of team members* based on his experiences with various team situations.

Definitely, the people that surround you. The team. The people you are working with. They most definitely impact that. Trying to strive for the best, there are going to be some people who are really good workers that I am going to emulate,

and there is also going to be the other extreme, or the people that have helped me come to that realization that there still are people in these professional work experiences who are not happy or motivated to be there. The team members definitely.

The student had the experience of working with severely disabled children, and that led to his insight about the sixth enabler that he called *ability to see bigger picture*.

One child that I supported, part of the affect of his disability was that he would live for another handful of years. Something that helped me have that “aha” moment of children’s happiness is the first and foremost in my mind, is that just looking at the bigger picture and not getting stuck in exactly what is happening at this time, or how things are being done, but looking at the bigger picture, realizing that there is always going to be something more important than what is happening right now, and trying to take what is happening right now to progress to the final goal, or final end. That was a big thing with keeping that specifically happy. He is probably going to have four more summers to have this experience. I am going to do everything in my ability to make sure that the child has the best experience.

This experience also provided the student with the context to explain the seventh enabler *feedback from client*, in that it was through his interactions with this child, and the feedback he received that he was able to have a transformative learning experience.

Just seeing him laugh and be happy in different activities. Even if it means he is not doing the activity like all the other children, that child is happy right now. You are making an impact on that child’s life.

The eighth construct related to the student's supervisor and was labelled: *motivating supervisor*.

Throughout the training we sat around the table and she asked us each individually what motivated us and what would help us achieve our targets. One of her strengths was playing to other people's strengths and using that to her advantage to make them the best employees she could.

This motivation extended to being given targets and goals for achieving results on one of the work terms. The student considered this to be an enabler of transformative learning and, as a result, this ninth construct was labelled: *targets and goals*. The student explained that having these targets and goals provided him with motivation regardless of the supervisor's presence.

Reaching targets and reaching goals like that is something that really works for me, and is something that I enjoy doing. The flip side of that, when the supervisor is not there, it is another thing that motivates you do the best you can because you can come back to that supervisor and show off and be proud of what you have done.

The tenth construct, labelled *working independently*, was seen by the student as an enabler of transformative learning based on his experience working on a project without any direct supervision and being given the freedom to do the job to his best ability.

That is another thing that enables those moments, is the supervisor not being there.

For the eleventh construct: *applying relevant learning* the student discussed how applying theory to practice enabled his learning.

One more obvious thing that enables those moments is taking things that you have learned in school and those aspects of your program that relate to the experience that you are doing. That really helps to enable learning. For that goal example, it wouldn't be something that I could speak to without that.

This construct was reinforced through reflective practices that the student used in journal writing and gave rise to the twelfth construct, *reflection in learning journal*.

I found that there are things that you are going to learn throughout the day/week on the job and you are definitely going to remember those, but you might not remember them until that situation arises again. I found keeping the learning journal and reflecting back on it, enabled me to look at those and apply what I learned in those settings to other settings. It definitely helped with some of the examples that I gave.

The thirteenth construct, *assessment based on learning goals and competencies*, was based on the student's experience of receiving an assessment from his employer, based on his learning goals and competence achievement.

At the beginning of the term you have the performance management template and you have different competencies, like team work, communication, technical expertise, and two other ones. You write down different goals and different things that you want to learn throughout the term. And then you have a mid-term assessment based on how well you think you have done and different examples of

how you have reached those goals and making goals for the rest of the term. That was a resource that the organization did that was really helpful in my learning personally.

The student described the fourteenth construct, *feeling supported*, as being an important enabler of transformative learning.

One huge thing is support. That is different than just the teammates . . . you need to feel supported not only from your teammates, your supervisor, but you need to feel supported from the parents of the children. You need to feel support from the children themselves. . . . You might have had the worst day in the world, you need to have that support at home, be it from your parents, be it from your significant other, to be able to go back the next day and have that same positive attitude.

The fifteenth and final construct was labelled: *feeling respected and seen as capable*. The student differentiated this construct from the previous one of being supported.

Someone can support you and have a little bit of respect for what you are doing, but not necessarily have the respect that is needed for you to feel that you are capable to learn or capable of being successful in your role. Having the respect from your supervisor or parents, or whoever, is very important as well as the support.

### **Repertory Grid Results**

Figure 66 shows how the student rated each enabler of transformative learning against each identified transformative learning example.



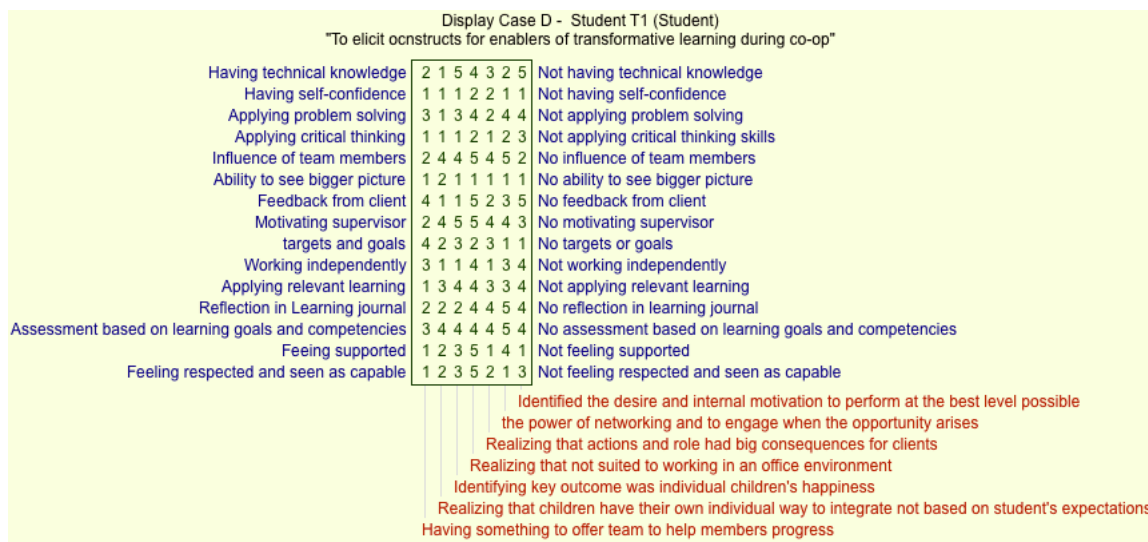


Figure 66. Repertory Grid Results: Case D Student T1

Table 17 displays the statistical results from this rating of the constructs against the elements.

Table 17. Case D Student T1 Means and Standard Deviations of Constructs

	Standard Deviation= $\leq 1$	Standard Deviation= $> 1$
Mean = 1 to 1.7	<p><b>Very Useful Enabler—Consistently</b></p> <p>C6. Ability to see bigger picture</p> <p>C2. Having self-confidence</p> <p>C4. Applying critical thinking</p>	<p><b>Very Useful Enabler—Not as Consistent</b></p>
Mean = 1.8 to 2.5	<p><b>Useful Enabler—Consistently</b></p> <p>C9. Targets and goals</p>	<p><b>Useful Enabler—Not as Consistent</b></p> <p>C10. Working independently</p> <p>C15. Feeling respected and</p>

		seen as capable C14. Feeling supported
<b>Mean= 2.6 to 5.0</b>	<b>Less Useful Enabler—Consistently</b> C11. Applying relevant learning C8. Motivating supervisor C13. Assessment based on learning goals and competencies	<b>Less Useful Enabler—Not as Consistent</b> C3. Applying problem-solving C7. Feedback from client C1. Having technical knowledge C12. Reflection in Learning journal C5. Influence of team members
	<b>Standard Deviation= &lt;=1</b>	<b>Standard Deviation=&gt;1</b>

### Case D Student T2

In the T2 interview, the student confirmed that the transformative learning examples given in T1 were still valid. He also identified one additional transformational learning moment that had been experienced in his current work term.

#### Transformative Learning Elements: T2

The new element identified by the student was labelled, *trusting in team can lead to positive results*. The student commented on the fact that, in his past, he has never felt

comfortable relying on others, but rather put pressure on himself to ensure a successful outcome. In his current work term, he came to realize the power of an effective team.

The “aha” moment for me, being that the help they gave was really reassuring and really supportive. The “aha” would be realizing that, currently, with specifically this team, that I can really trust them, and that working together you can do great things or better things.

Allowing himself to trust the team, an example of relational agency (Edwards, 2009), enabled him to take the lead in planning and executing an activity that led to the betterment of the program, as well as his own transformative learning.

### **Transformative Learning Constructs: T2**

The student confirmed that the enablers, or constructs, he had identified in T1 were still valid and added one more, based on his current work term experiences labelled *opportunity to reflect with team*, an example of relational epistemology (Taylor, 2005).

What I found really effective this summer was that we were fortunate to have an hour after the kids go home to have a debrief, and talk about the day, the highs and lows, things that need to be changed or improved upon. I think that communication and the ability to vent and listen to other people’s opinions and perspectives, can enable more learning and more successes in the following days.

### **Repertory Grid results**

The addition of the new element and construct, and the rating that the construct was given did result in some changes to the results in T2. A revised repertory grid display of how this new set of elements and constructs was ranked is shown as Figure 67.

Display Case D - Student T2 (Student)  
"To elicit constructs for enablers of transformative learning during co-op"

Having technical knowledge	2 1 5 4 3 2 5 4	Not having technical knowledge
Having self-confidence	1 1 1 2 2 1 1 3	Not having self-confidence
Applying problem solving	3 1 3 4 2 4 4 3	Not applying problem solving
Applying critical thinking	1 1 1 2 1 2 3 2	Not applying critical thinking skills
Influence of team members	2 4 4 5 4 5 2 1	No influence of team members
Ability to see bigger picture	1 2 1 1 1 1 1 2	No ability to see bigger picture
Feedback from client	4 1 1 5 2 3 5 4	No feedback from client
Motivating supervisor	2 4 5 5 4 4 3 2	No motivating supervisor
targets and goals	4 2 3 2 3 1 1 3	No targets or goals
Working independently	3 1 1 4 1 3 4 2	Not working independently
Applying relevant learning	1 3 4 4 3 3 4 2	Not applying relevant learning
Reflection in Learning journal	2 2 2 4 4 5 4 4	No reflection in learning journal
Assessment based on learning goals and competencies	3 4 4 4 4 5 4 4	No assessment based on learning goals and competencies
Feeling supported	1 2 3 5 1 4 1 1	Not feeling supported
Feeling respected and seen as capable	1 2 3 5 2 1 3 1	Not feeling respected and seen as capable
Opportunity to reflect with team	1 3 5 5 2 3 4 2	No opportunity to reflect with team

Trusting in team can lead to positive results  
 Identified the desire and internal motivation to perform at the best level possible  
 the power of networking and to engage when the opportunity arises  
 Realizing that actions and role had big consequences for clients  
 Realizing that not suited to working in an office environment  
 Identifying key outcome was individual children's happiness  
 Realizing that children have their own individual way to integrate not based on student's expectations  
 Having something to offer team to help members progress

Figure 67. Case D Student T2 Repertory Grid Results

As a result of these changes, new statistics were calculated, shown in Table 18.

Table 18. Case D student T2 Means and Standard Deviations of Constructs

	Standard Deviation= $\leq 1$	Standard Deviation= $\geq 1$
Mean = 1 to 1.7	<b>Very Useful Enabler—</b>  <b>Consistently</b>  C6. Ability to see bigger picture  C2. Having self-confidence  C4. Applying critical thinking	<b>Very Useful Enabler—Not as</b>  <b>Consistent</b>
Mean = 1.8 to 2.5	<b>Useful Enabler—Consistently</b>  C9. Targets and goals	<b>Useful Enabler—Not as</b>  <b>Consistent</b>  C10. Working independently  C15. Feeling respected and seen as capable

		C14. Feeling supported
<b>Mean= 2.6 to 5.0</b>	<b>Less Useful Enabler— Consistently</b> C11. Applying relevant learning C13. Assessment based on learning goals and competencies C3. Applying problem-solving	<b>Less Useful Enabler—Not as Consistent</b> C7. Feedback from client C1. Having technical knowledge C12. Reflection in Learning journal C8. Motivating supervisor C5. Influence of team members C16. Opportunity to reflect with team
	<b>Standard Deviation= &lt;/=1</b>	<b>Standard Deviation=&gt;1</b>

The focus, or matching between the elements and constructs at T2 can be seen in Figure 68.

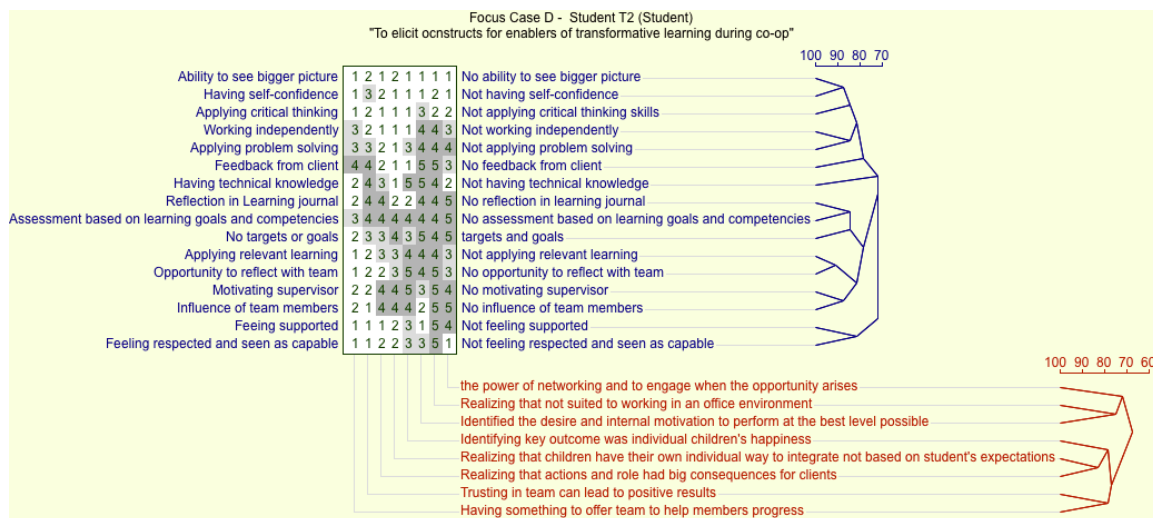


Figure 68. Focus of Elements and Constructs Case D Student T2

The student confirmed that the two elements that were the most closely aligned. The elements of realizing *that children have their own individual way to integrate not based on student's expectations* and realizing *that actions and role have big consequences for clients* were still distinct and separate in his mind.

The closely matching constructs were, *motivating supervisor* and *influence of team members*, and described by the student as distinct yet aligned:

I think they are probably similar because, your supervisor can be part of your team as well. When I was looking at influences of team members, I would probably have thought of the supervising being in that. But at the same time, I think a motivating supervisor on its own is also very important.

The final set of matching constructs was *applying relevant learning* and *opportunity to reflect with team*. These were explained as being aligned yet separate:

When you are reflecting with the team and everyone is giving their input about different situations that they have had in the past, different experiences, different learning that they have had and the input and relating it to the current situation.

In summary, when exploring the matches between the elements and constructs the student articulated an underlying rationale for these matches and for keeping them as separate transformational learning examples and enablers.

### **Narrative Analysis: T1**

An analysis of the interview narrative revealed five latent themes: confidence, learning, happiness, support and motivation, and the team. For the student in Case D, confidence was boosted by technical expertise, being an integral part of the team, being given a high level of responsibility and opportunities to network:

Yes, go for it and put yourself out there. Even if you are not comfortable in doing it, what is the worst that can happen?

Having confidence related to the second theme, *learning*, through the student's assertion that having confidence allowed him to analyze the instructions he had been given, use his judgement and change to a more child-centric approach.

For example with the children, about their happiness, it had been pounded into us that you want to integrate these children and you want to do everything you can to integrate them. At the beginning I had to learn how different methods and ways to try and integrate them and test out those methods, before I personally gained the confidence to have that "aha" moment and realize that that wasn't necessarily making the child happy.

Other dimensions to the learning theme were the application of relevant coursework and keeping a learning journal in order to relate that school work to the work experience. Learning also involved setting and assessing learning goals.

The third theme, *happiness*, included the happiness of the children he worked with, as well as, discovering what led to his own personal happiness. Initially, the student was focused on integrating the child in his care into camp activities.

I was always trying to really push him to get him into different activities. It was obvious that he wasn't having fun.

The student's focus began to shift away from viewing the child as having a disability who needed to be integrated, towards one of seeing the child as having the desire to have fun and enjoy himself, regardless of how well he was integrating.

It was my first time working with children with disabilities. I was there to actually give them a good time in camp . . . I am going to do everything I can do to have the child integrated and have them around the children as much as I can, doing whatever activity they are doing, but at the same time, making sure they are happy and not necessarily pushing them and forcing them to act or behave or do an activity in a certain way, just because all the other children are.

The importance of the child's happiness was especially brought home to the student when he realized that this particular child would not have a long lifespan.

The student's personal happiness was also captured in this theme. This included coming to the conclusion that having a desk job was not something he "enjoyed." He bolstered his happiness with maintaining a "positive" and "professional" manner and



striving “to be excellent in all the areas” that he could. Having the support and motivation from others, the fourth theme, helped him maintain his positive attitude.

You might have had the worst day in the world, you need to have that support at home, be it from your parents, be it from your significant other, to be able to go back the next day and have that same positive attitude.

In addition to family and friends, the student considered teammates and his supervisor to be important supporters. This latter supporter was the source of motivation through the setting of targets, which added to the student’s happiness.

Reaching targets and reaching goals like that is something that really works for me, and is something that I enjoy doing.

The final theme, *team*, described the influence team members had on the student’s work habits, by providing positive role models as well as examples of how not to behave.

The people you are working with. They most definitely impact that. Trying to strive for the best, there are going to be some people who are really good workers that I am going to emulate, and there is also going to be the other extreme, or the people that have helped me come to that realization that there still are people in these professional work experiences who are not happy or motivated to be there.

### **Narrative Analysis: T2**

In T2, the narrative themes were reinforced and expanded. Of the confidence theme, the student talked about the role that confidence played in helping him look past the instrumental completion of a task, towards an expanded view of the situation at hand:

Whereas if you are confident and feel well prepared and you can do the job and do the task, then you are going to not only look at the individual task, but look at how it is affecting everybody in the environment and how the environment is affecting that task, and everything.

Having been given many opportunities to plan for and execute plans over the work term, his confidence grew with each success:

I found with planning the week and a few other things recently is that the things that I have been really worried about or nervous about, are the things that actually end up the best. That is really healthy to bolster my self-confidence.

The importance of reflection for learning was expanded beyond personal reflection to include reflection with others, something that occurred on a daily basis after work:

We were fortunate to have an hour after the kids go home to have a debrief, and talk about the day, the highs and lows, things that need to be changed or improved upon. I think that communication and the ability to vent and listen to other people's opinions and perspectives, can enable more learning and more successes in the following days.

This added reflection contributed to the student's ability to broaden his perspective:

I don't try to look at one single day, or one single week, but look at the whole summer and see how it is impacting or improving the lives of the children as well as where it is taking me, and the competencies that I am getting from it.

The student added to the theme of support and motivation by describing an additional area that was motivational, making a difference:

To do something that made a difference based on what people did the previous years and the impact they had left.

The theme of *team* was expanded with the concept of trust and how the student learned how to trust teammates and the impact that made:

I can really trust them, and that working together you can do great things or better things . . . (in the past) I have had a difficult time trusting the team, and that has hindered the results.

#### **Data Interpretation and Discussion: Student Case D T1**

The student's constructs map onto the WIE academic and workplace activity systems (Figure 69) as follows:

1. Tools (the means by which the activity takes place). From the WIE program and workplace: *applying relevant learning* (C11) and *assessment based on learning goals and competencies* (C13). From just the workplace: *working independently* (C10). From the WIE program: *reflection in learning journal* (C12);
2. Subject (the student): *having technical knowledge* (C1), *self-confidence* (C2), *applying problem-solving* (C3), *applying critical thinking* (C4), *ability to see bigger picture* (C6), *feeling supported* (C14) and *feeling respected and seen as capable* (C15);
3. Subject (the supervisor): *motivating supervisor* (C8), *feeling supported* (C14), *feeling respected and seen as capable* (C15);

4. Rules (the cultural norms, standards, guidelines): From the workplace: *targets and goals* (C9); and
5. Community (socio-cultural environment in which the activity takes place). From the WIE program and workplace: *feeling supported* (C14). From the workplace: *influence of team members* (C5), *feedback from client* (C7) and *feeling respected and seen as capable* (C15).

## WIE and Workplace Activity Systems

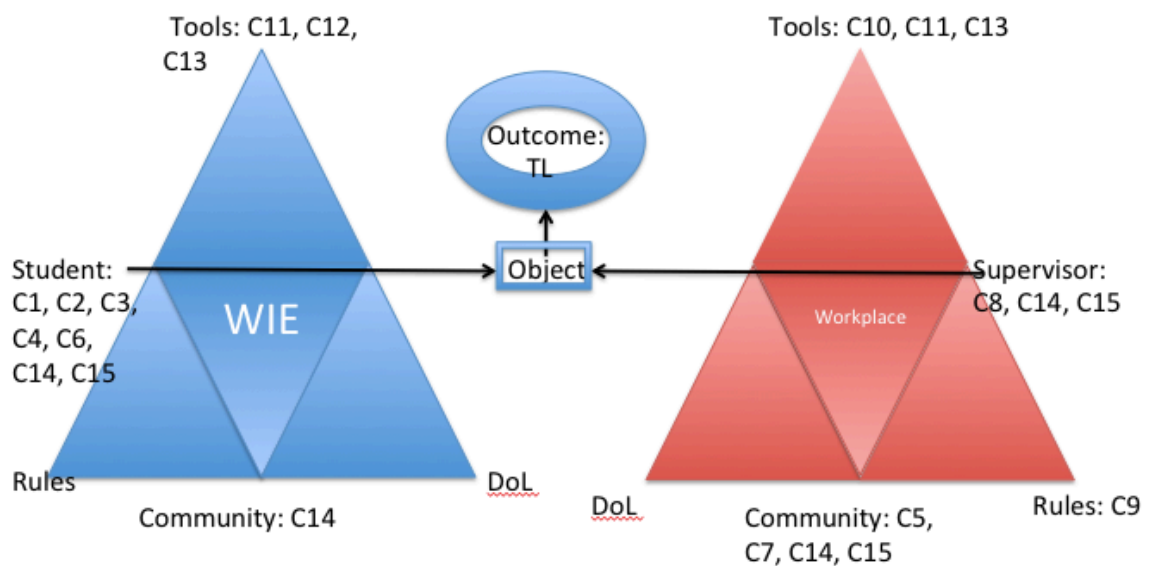


Figure 69. Case D Student T1 WIE and Workplace Activity Systems

### Dynamic Nature of Activity Systems

These activity systems are not static, but rather have an internal dynamic of tensions between components of the system. With Case D student in T1, this dynamism

within the WIE system is found in the Subject-Object-Tools (SOT) sub-triangle, seen in Figure 70.

## Dynamism within WIE Activity System

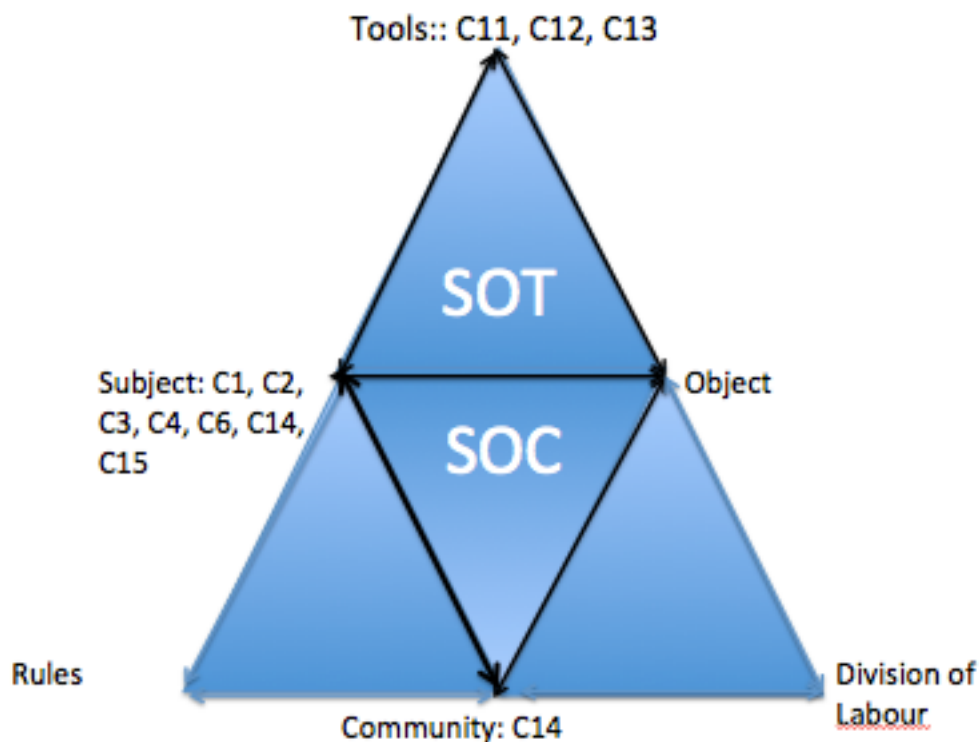


Figure 70. Case D Student T1: Dynamism Within WIE System

The tools that the student had from his WIE program were: *applying relevant learning* (C11), *reflection in learning journal* (C12), and *assessment based on learning goals and competencies* (C13). Two of these constructs were all tools that the student used to foster his critical reflection (Schön, 1983), which then led to transformative learning. Applying his learning was a tool from his WIE academic program, and through applying this learning; he came to realize its relevance in relation to his work. The dialectical process of applying his learning, questioning and affirming its relevance led to expansive learning (Engeström, 1987) and subsequent transformative learning. The other area of this sub-triangle are the constructs from the student's component of this activity

system: *having technical knowledge (C1), having self-confidence (C2), applying problem-solving (C3), applying critical thinking skills (C4), ability to see bigger picture (C6), feeling supported (C14), feeling respected and seen as capable (C15).*

These constructs are a mix of personal attributes such as confidence and ability to see the big picture, as well as the analytical skills of critical thinking and problem-solving. These attributes and skills were put to use by the student in the workplace as he was faced with challenges and tasks. The ability to put these to use, and engage in the critical reflection required, enabled his transformative learning. Within this construct group are two emotion-based constructs: *feeling supported* and *feeling respected*.

Having these positive emotional states provided a degree of comfort for the student that enabled the vulnerability required to critically reflect (Hanson, 2013). He was enabled to engage in the expansive learning (Engeström, 1987), tackle workplace challenges, and activate his volitional capabilities (Roth, 2007). The importance of this emotional dimension for the student is highlighted in the second area of the WIE activity system that is most evidently active- the Subject-Object-Community (SOC) sub-triangle. What is shown here is that the support provided by the student's community added to his general feeling of being supported.

The dynamic nature of the workplace system is also shown in Figure 71.

## Dynamism within Workplace Activity

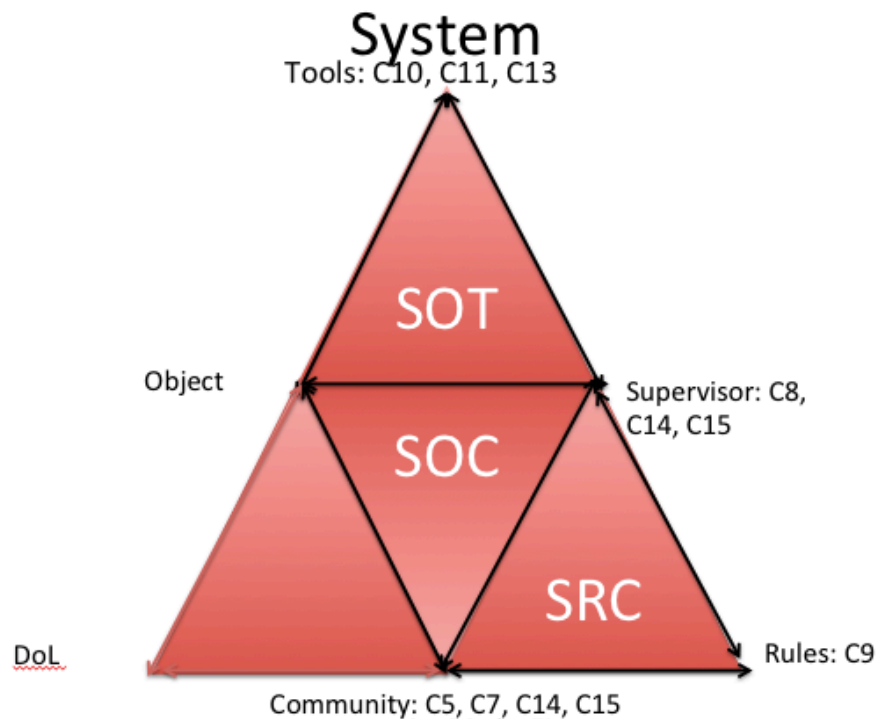


Figure 71. Case D Student T1: Dynamism Within Workplace System

This figure shows that there are three sub-triangle areas of the workplace system that seem to be most dynamic. These are: the Subject (supervisor)- Object-Tools (SOT), Subject (supervisor)-Object-Community (SOC) and Subject-Rules-Community (SRC) sub-triangles. The tools of: *working independently* (C10), *applying relevant learning* (C11), and *assessment based on learning goals and competencies* (C13) enabled transformative learning through the dynamic relationship these tools had with the work term object.

The student was given opportunities to work independently and apply his relevant learning to the task requirements. The supervisor participated in the assessment, and by so doing supported the student's critical reflection on his performance. Being afforded opportunities to work independently and having relevant course knowledge and skills to

apply allowed the student to stretch into his role, again allowing for transformative learning. The *motivating supervisor* (C8), *feeling supported* (C14) and *feeling respected and seen as capable* (C15) set the positive emotional context at the student's workplace, and identified the emotional-volitional connection (Roth, 2007). This enabled the student's transformative learning by providing a safe place for the student to stretch and grow.

In the SOC sub-triangle the importance of the community becomes evident: *influence of team members* (C5), *feedback from client* (C7), *feeling supported* (C14) and *feeling respected and seen as capable* (C15). Working as part of a team that provided support and respect gave the student the confidence to do his work and to try new things. The direct contact he had with clients, and the responses he received from them enabled his transformative learning. What he had expected as client responses was not what he experienced. This contradiction forced him to re-think his assumptions about his clients, what they were capable of, and what made for their happiness.

The construct of *targets and goals* (C9) is active in the rules component of the workplace activity system. The SRC dynamism comes about through the interaction of the motivating and supportive supervisor who sets these targets and goals and the work of the team to achieve them. The tensions amongst these three dimensions of this sub-triangle enabled the student's transformative learning experiences, relating to his realization that he had something to offer the team to help them progress, and the identification of his desire and motivation to perform at the best possible level.



## Strength of Constructs

To examine the strength of the relationship of the constructs against the elements, the means and standard deviations were used to map the constructs according to the categories: very useful-consistently, very useful—not as consistent, useful—consistently, useful—not as consistent, less useful—consistently and less useful—not as consistent. These very useful—consistent constructs had mean scores from 1-1.7 and standard deviations less than and equal to 1.0. They map against the student component of the WIE academic system: *having self-confidence* (C2), *applying critical thinking* (C4), and *ability to see bigger picture* (C6).

One construct, workplace: *targets and goals* (C9), was rated as useful and consistent, with a mean score from 1.8 – 2.5 and a standard deviation less than and equal to 1.0: The useful—not as consistent constructs had mean scores from 1.8 – 2.5 and standard deviations greater than 1.0 and were:

- Tools: workplace: *working independently* (C10);
- Subject: both WIE student and workplace supervisor: *feeling supported* (C14) and *feeling respected and seen as capable* (C15);
- Community: WIE program: *feeling supported* (C14); and
- Community: workplace: *feeling supported* (C14) and *feeling respected and seen as capable* (C15).

The less useful and consistent constructs (mean scores greater than 2.5 and standard deviations less than and equal to 1.0) were:

- Tools: workplace: *applying relevant learning* (C11), and *assessment based on learning goals and competencies* (C13); and

- Subject: workplace supervisor: *motivating supervisor* (C8).

The less useful and not as consistent constructs had mean scores greater than 2.5 and standard deviations greater than 1.0 and were:

- Tools: WIE program: *reflection in learning journal* (C12);
- Student: *having technical knowledge* (C1) and *applying problem-solving* (C3);  
and
- Community: *influence of team members* (C5) and *feedback from client* (C7).

### **Connectivity Between Systems**

Figure 72 shows the connectivity between the WIE and the Workplace activity systems. For the case of this student Case D at T1, the constructs of *applying relevant learning* and *assessment based on learning goals and competencies* connect both the WIE academic program and the workplace, as has occurred in the other cases.

Additionally, the student spoke about the amount of support and respect he received from his workplace supervisor, co-workers and from his own community of colleagues, friends and family. This support represented another dimension of connectivity, one that acted almost as a cradle, or safety net, that enabled his transformative learning. In addition to the boundary spanning (Engeström, 2009), this other connectivity might be considered in an expanded, socio-cultural version of a Vygotskyian zone of proximal development (Vygotsky, 1978).

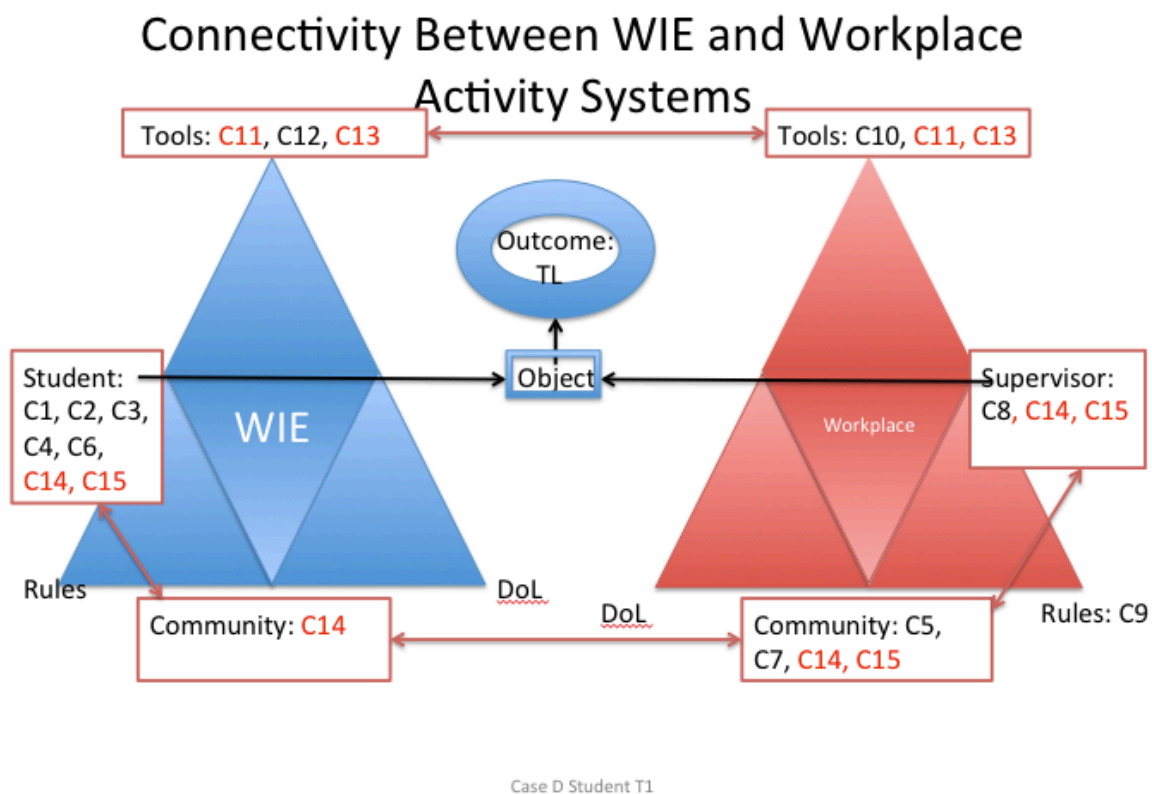


Figure 72. Case D Student T1 Connectivity

#### Data Interpretation and Discussion: Student Case D T2

The additional construct of opportunity *to reflect with team* (C16) fit onto the community component of the WIE workplace activity systems. This change is noted in Figure 73 of the two WIE academic and workplace systems, with the new construct identified.

## WIE and Workplace Activity Systems

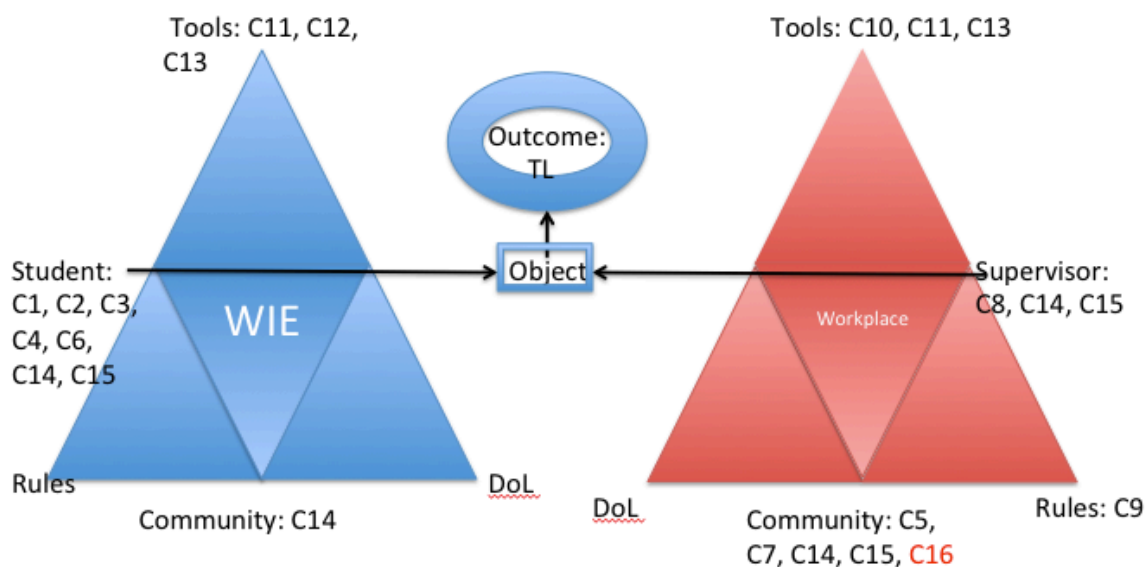


Figure 73. Case D Student T2 WIE and Workplace Activity Systems

### Dynamism in the Activity Systems

As the only additional construct emerged in the community component of the workplace activity system, this system was the only one where the dynamic changed in T2. The added construct of *opportunity to reflect with team* intensified the interaction of the community with the object. The student was involved in daily reflection on his work with his teammates, a form of organizational critical self-reflection (Mezirow, 1998). This supported reflection enabled his transformative learning.

### Strength of Constructs

The addition of an element and a construct in T2 resulted in changes to the ratings. This only affected the strength of the constructs in the category “Less useful—

consistently” and “Less useful—not as consistent”. The less useful—consistently constructs had mean scores over 2.5 and standard deviations less than and equal to 1.0. The change from T1 was that the construct *applying problem-solving* moved into this category from the “less useful—not as consistent” category. The construct of *motivating supervisor* moved out of this category and into the “less useful—not as consistent” category joining *opportunity to reflect with team*. This demonstrates that the student applied his problem-solving skills more consistently in the term, and that the roles of the *motivating supervisor* and *reflection* were not as consistently applied.

In summary, this analysis demonstrated the dynamic nature of the construct strength from T1 to T2. However, in the case of student D, this change was not as pronounced as in some of the other cases.

### **Strength of Constructs: Based on Experience Perspective**

The student experiences included constructivist, critical cultural, psychoanalytical, situative, and enactivist. For the experience of *realizing that children have their own individual way to integrate not based on student’s experiences*, the associated constructs were identified as having *technical knowledge, feedback from client, targets and goals, working independently, reflection in learning journal, feeling supported* and *feeling respected and seen as capable* were identified as very useful and consistent enablers of this transformational learning experience. With this experience, the student required technical knowledge of the needs of students with disabilities. As well significant interaction with these children provided ongoing feedback on their needs. Working independently and using reflection provided him with the opportunity to consider the dynamic tensions between what he knew, and thought he knew, and what the

children needed. All of this occurred within a supportive environment that allowed him to experience the personal vulnerability (Hanson, 2013) needed to be open to this level of narrative critical self-reflection (Mezirow, 1998). This then led to his transformative learning

With the critical cultural experience: *identifying key outcome was individual children's happiness* the constructs: *feedback from client, working independently and reflection in learning journal* are seen as very useful and useful enablers of this transformational learning experience. Again, through working independently and having feedback from clients—children with disabilities—the student was able to reflect upon and consider the children's emotional state as a crucial outcome. In relaying this example, the student spoke about the role that working independently had in enabling this learning. He had started the term following instructions closely about integrating the children into activities, but came to see that pushing them towards technical competence in an activity was not leading to their happiness. As he was working independently, he could adjust his interactions and find a balance where the child was being integrated at a pace with which they were happy. He was employing systemic critical self-reflection (Mezirow, 1998) in considering the systemic need for integration versus the individual happiness of the child, and acted accordingly.

The major thing is getting over that hurdle that you are not just a puppy following the leader.

As in the psychoanalytical experience, the student had *identified the desire and internal motivation to perform at the best level possible*, and the constructs *influence of team members, targets and goals*, and *feeling supported* are identified as very useful and useful

enablers. The targets and goals acted as extrinsic motivators, his team members influenced how he approached these goals and the supportive environment contributed to his self-confidence that boosted his self-efficacy, leading to transformative learning. Importantly, the influence of these team members was not always inspirational, but provided learning, nonetheless:

The people that surround you. The team. The people you are working with. They most definitely impact that. Trying to strive for the best, there are going to be some people who are really good workers that I am going to emulate, and there is also going to be the other extreme, or the people that have helped me come to that realization that there still are people in these professional work experiences who are not happy or motivated to be there.

The student identified the situative experiences of *realizing that not suited to working in an office environment, the power of networking and to engage when the opportunity arises*, and enactivist experiences of *realizing that actions and role had big consequences for clients, having something to offer team to help members progress and trusting in team can lead to positive results*. The following constructs were rated as very useful and useful: *feeling supported, feeling respected and seen as capable, targets and goals* whereas *opportunity to reflect with team* was rated very useful and useful. Feeling respected and being seen as capable was an important enabler of the student being able to identify himself as a member of a community, and capable of legitimate peripheral participation (Lave & Wenger, 1991). Being part of the community of practice enabled the student to come to realize that working in an office would not be suitable, and the importance of networking to his success. His transformative learning about the

consequences of his actions and the contribution he can make to a team demonstrates both the individual and social transformation that resulted for this student (Taylor, 2008).

These experiences are categorized in Table 19 in the four categories proposed by Fenwick (2000) with the new element in red font.

Table 19. *Case D Student T2 Transformative Learning Elements*

<p style="text-align: center;"><b>Constructivist</b></p> <ul style="list-style-type: none"> <li>• Realizing that children have their own individual way to integrate, not based on student's expectations</li> </ul>	<p style="text-align: center;"><b>Critical-cultural</b></p> <ul style="list-style-type: none"> <li>• Identifying key outcome was individual student's happiness</li> </ul>
<p style="text-align: center;"><b>Psychoanalytic</b></p> <ul style="list-style-type: none"> <li>• Identified the desire and internal motivation to perform at the best level possible</li> </ul>	<p style="text-align: center;"><u>Situative</u></p> <ul style="list-style-type: none"> <li>• Realizing that not suited to working in an office environment</li> <li>• The power of networking and to engage when the opportunity arises</li> </ul> <p style="text-align: center;"><u>Enactivist</u></p> <ul style="list-style-type: none"> <li>• Having something to offer team to help members progress</li> <li>• Realizing that actions and role had big consequences for clients</li> <li>• <b>Trusting in team can lead to positive results</b></li> </ul>



### **Connectivity Between WIE and Workplace Activity Systems**

The points of connectivity (C11 and C13) remain unchanged from T1 to T2. The supports of C14 and C15 also remain in place in T2.

### **Summary of Comparison of Case D Student between T1 and T2**

In T2, the student gained an enactivist experience labelled as *trusting in team can lead to positive results* and one new construct *opportunity to reflect with team*. New ratings resulted in changes to the means and standard deviations of the constructs and movement from whether a construct became less useful and consistent (*applying problem-solving*) or less consistent (*motivating supervisor*). The change in the internal dynamism of the WIE workplace activity systems was affected by the addition of the construct. The dynamics became more pronounced, especially in the SOC sub-triangle.

The changes in T2 demonstrate development in the student's relational epistemology (Taylor, 2005) and relational agency (Edwards, 2009) that resulted in organizational critical self-reflection (Mezirow, 1998). This appeared to produce transformative learning that was both personal and social in nature (Merriam et al., 2007).

### **Integration**

The final component of the T2 interview was to explore the idea of integration of the transformative learning into the workplace and back into the WIE academic program. The student identified the transformative learning experience of *trusting the team* as one that would also enable his learning upon return to school, an indicator of integration:

I know, looking ahead to the fall, the “aha” moment that I said about trusting the team, understanding the influence of the team, I know that that will be something

that I will take back with me to school for sure. It is not just in the workplace previously where I put a lot of pressure or responsibility on myself, but that happens at school as well. Anything from a project, for example with partners, I have always stressed out if so and so is doing their part of the job, texting them, messaging them, to make sure that it is getting done, or taking on more responsibility of their part to do, because I'm afraid that it is not going to get done. But after this work experience, specifically, I think I will be more able to trust the person, if I have a good partner, good group.

The student described how his work experience successes, as a result of putting more trust in his team, also reinforced his self-confidence, one of his enablers. He saw a direct connection between how this would be integrated into his WIE academic program when he returned.

I think that helped with my self-confidence, not only with that specifically, but also I think that can be translated back into school in different forms. I have always been confident that if I do the work I will get good grades, but like anybody I get nervous before tests, what I found with planning the week and a few other things recently is that the things that I have been really worried about or nervous about are the things that actually end up the best. That is really healthy to bolster my self-confidence.

The student considered the additional enablers of having *technical expertise*, *reflection*, *ability to see a bigger picture*, *critical thinking*, *a motivating teacher* and

*targets and goals* as also being integrated back into his WIE academic program, enabling his learning.

The technical expertise about learning what is in the textbook, or what the professor is presenting, relating that to a team, for the communication piece. So you and your group are on the same page and setting yourself up for success in that way. Some of the other enablers, I touched on self-confidence, even things like keeping a learning journal for example. I am not necessarily going to keep a learning journal of what I'm doing in a class, but at the same time, you can reflect back on what worked. . . . You can get stuck on learning about the definitions of health determinants, but looking at the big picture and critically thinking, and analyzing those health determinants to your life, or your family's life. Not focusing on one thing, but really broadening it. I think that is really important. . . . Again, a motivating teacher can be really important for sure. One of my teachers really wanted us to go and do something that made a difference in the community that could be anything, he really motivated us to do something that made a difference based on what people did the previous years and the impact they had left. That is one for sure. Targets and goals, that is something that I go into every school system keeping in mind, wanting to get these grades and really working towards and having that in my mind before the first assignment is distributed.

When considering the integration of the transformative learning into the workplace, and the role of the enablers in that process, the student provided many examples of how this integration was manifested.

Trusting in the team. With what is happening right now, we are responsible for 3 or 4 different campers each on any given week. Sometimes if one your children needs extra care, or extra support, they will go off with a volunteer or other camp leader so you can stay with your other campers. Just having that trust, not only helps that individual person, but will also help the other campers. . . . Whereas I have also had different work experiences, where I have had a difficult time trusting the team, and that has hindered the results.

The power of networking. That has been really important this summer. We had our training with . . . a bunch of different organizations, what I found was that by networking with those individuals, all those people that I named, we have had contact with since then. I don't know if those opportunities would have come about had it not been for the networking that we did with them during the training sessions.

Opportunity to reflect with the team. If I didn't trust our team and see the positive results that were coming out from that, then I wouldn't feel that I could let everything out when the opportunity did arise.

It is really having self-confidence. At Company X (previous work term) I was the one sitting at our table, not moving. I didn't have the confidence; I didn't understand the importance of going to talk to those people. But mostly I didn't have the confidence to go and do that. Whereas, this summer I was one of the people going to talk to the different organizations.

Also when you are putting yourself out there, you not only need to have the self-confidence to go and network with people, but you also have to feel like they respect you and see you as capable. I think that is important as well. It always comes back to the bigger picture. Why go talk to them? Am I going to talk to them about just trying to plan something for one day that we need filled, or is this a bigger picture thing and having this connection with them, so that whoever works for X next year, and the following has that connection.

This student also reveal that reflecting on his transformative learning from this, and previous, work terms would be of benefit to future work experiences.

Also important is having the ability to look at the different work experiences, compare them, and pull the best and worst things out of each, and see how they line up and see what you are learning and what you have learned, or your “aha” moments can be transmitted to future work experiences, that type of thing.

Figure 74 shows this integration.

# Integration of Outcome Between WIE and Workplace Activity Systems

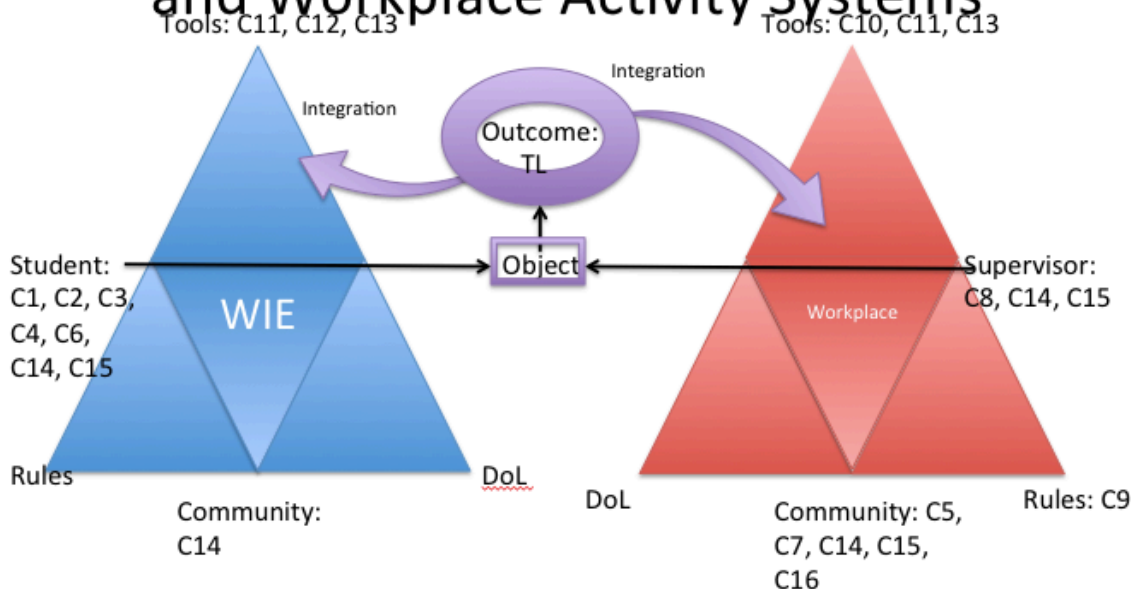


Figure 74. Case D Student Integration of Outcomes into WIE Program and Workplace Systems

## Results from Interviews: Case D Supervisor T1

### Transformative Learning Elements

The supervisor was very clear in her understanding of transformational learning:

Means sort of a magnificent change and something that looks at learning and change that has happened, not just on some surface level, but more of a mind shift, a paradigm of a different lens in which we see the world.

She was able to identify seven transformational learning examples from her experiences with students. The first of these constructs is *overcoming difficulties in administering standardized tests*. This example was based on watching a group of

students learning how to administer standardized tests to children. While the students had read about the testing techniques, they encountered several challenges when trying to operationalize the testing with children. After several failed attempts, the students were encouraged to reflect on what had gone wrong and strategize on their next approach. The students were able to move past their initial disappointment with their performance and devised successful ways to administer the testing in real-life situations.

They really had overcome a little bit of inertia, which was just overwhelming at the beginning of what they expected and what happened.

The second example related to what the supervisor called the arduous and multi-level documentation that is required when working with clients in the rehabilitation facility. This was labelled *able to handle documentation requirements*. What made this transformative for students was the understanding that they had the capacity to manage the workload associated with documentation, as well as the realization that the case notes they wrote were important contributions to the overall health care treatment of the client.

Here there is almost like epistles that need to be written, big summaries of progress. They go to clinics, they go to doctors. Your credibility, it is quite symbolic around that. I have seen people almost light up when they finish some form of documentation and someone is going “Great, that is really great.”

The third example of transformative learning was labelled *making a difference in the life of a family or child* and described the situation of a student who worked extensively to find a way for a toddler to accept a prosthetic arm. The student came up

with a creative solution and implementation method that was positive and successful for the child and her family.

It is more about making a difference on a one to one basis with a family and child. I guess at the end of the day that is the moment I'm looking for. You can learn something cognitively, you can administer it great and feel this wonderful, almost machine-like person who says the right words and writes down the right score and everything is fine on your paper, but at the end of the day, if you are in this business, that "aha" moment is going to be about when you have made a difference to someone. That power of one.

The fourth example provided centered around working with family members of children with special needs. This was labelled *establishing a caring relationship with a family member*. The supervisor described a situation in which a parent was isolated and having difficulty managing with the challenges her child faced. Being able to build a relationship with that parent was transformative in that the student realized he had the ability to make a difference in someone's life.

There wasn't a particular skill or exercise, or change in the environment. It was actually the establishing of the environment with that parent. Creating professional relationships, caring relationships is another one of those moments.

Moving away from client contact and into the organizational domain, the next example of transformative learning was based on the supervisor having observed students' realization that they have something of value to add in team meetings. This example is labelled *discover when they have something to contribute to team meetings*.



I'd say that my next example would be about when students find that they have something to say in a meeting, in a real multidisciplinary, lots of professionals sitting around the table, the doctor. I think when they find that they contribute their knowledge, their recommendations, whatever, that is pretty powerful to be seen as a respected member of the team. That I have seen more than once. It is one of the things that we require. It is about being valued. It is about inter-collaborative practice. It is about communication skills too.

This contribution led to the sixth example: *become a respected member of team*.

The supervisor differentiated contributing to a team and becoming a respected member of the team in the following passage:

One contributes to the other, but they aren't exactly the same. There is other ways to be seen as a respected member of the team. We work a lot together in this facility. Lots of joint treatments, joint assessments, co-therapy. There is a lot of use of the primary therapy models. One person is designated as that family's go to and the other five feed into the one because the family doesn't need to see six people, two or three times a week when they are already struggling. They could be considered separate things, but one does lead to the other. Contributing at a team meeting at a moment when people are bearing witness to what that person has to offer does validate what they are doing.

The final example of transformative learning was labelled *recognizes the value of all ability levels* and resulted from the moment when a student valued a client, not for

what level of ability they might or might not have, but for who they were, at their current ability level.

There is no way you can get this from a textbook or from school. It is when I see in someone's heart, soul and mind, the value of everyone, the value of all ability. That moment where somebody matters. Whatever their level of ability is at point A and maybe I have helped them get to B or C, but it is not typical still, there is such value in that, meeting someone at whatever their abilities are and respecting that individual, that child, that family for where they are at and trying to move forward from there.

### **Transformative Learning Constructs**

The supervisor identified eleven constructs, or enablers of the transformative learning. The first of these was *experiments safe to fail* where the student is provided with an opportunity to try something with a client in a way that would offer a good learning experience, but would not be too risky. The example the supervisor reflected on was that of the student creating a solution for the toddler who required a prosthetic arm. The student addressed this problem by removing the arm of a doll as a way to help the toddler understand how the prosthetic arm could help.

That it is really about, as a student, trying to figure out what they can experiment with that isn't going to result in something horrible, safe to fail, and then you go and do that intervention. The example of the doll. "What am I going to do to have this toddler accept that prosthetic?" I have to think of something that is safe to fail? You set up that condition and they actually did it.

The second construct was labelled *supervisor understands what knowledge students have* and was seen as an enabler of transformative learning. The supervisor based on his understanding of the student's knowledge to provide students with opportunities for experiments that were safe to fail. Awareness of the level of student knowledge set the stage for the supervisor to add to that knowledge, as required.

You have to provide them the content. You can do all these things to get someone into the water, but at the end of the day if they don't know how to swim you are not helping them.

NM: The supervisor understands what knowledge students have.

And what they need to have in a particular situation. How we define "need to have knowledge" is based on the clients that they are going to interact with.

The third construct was labelled *reflection on learning*. The supervisor considered engaging in reflective practice as an enabler and described the questions that are asked of students to promote reflective practice at a daily debriefing session:

What am I going to do differently? This is what happened?

These reflective questions were supported by the supervisor, and as such gave rise to the fourth construct of supervisor *that coaches*.

I need to coach them through that circle. And we will do that on a regular basis.

The fifth construct, labelled *set learning goals* also resulted from the reflective practice enabler, as it formed part of the process used by the supervisor.

The sixth construct, *regular check in meetings*, referred to the daily debriefing sessions, held to support reflection by the student on what they had learned from the day's events and what that meant for their future endeavours.

The supervisor identified providing additional knowledge or "content" as another enabler: *provide content required for client needs*.

Our co-op students need to be facilitated to have the knowledge they need to meet the needs of the clients they are going to serve. That is a finite population. I can do that for them. I know what they need to know. The first thing is making sure that they get what they need to know, which is going to happen through our training in June.

In addition to the required content, students also needed to have opportunities to apply this knowledge. As such, this eighth construct of *opportunities to apply knowledge* was identified.

Then it is about providing the situations where they can apply personally that knowledge, that intervention with folks.

The supervisor added that having a relationship with the client was a key ingredient to having transformational learning, and this ninth enabler was labelled: *have relationship with clients*. If the student had a relationship with the client, then they can see the difference that an intervention actually had on the life of a client, leading to a transformative learning experience.

One of the ingredients in addition to knowledge is having the relationship. They have to have a relationship with their clients which is also going to happen, that is

how it will really enable that transformational moment. So when change occurs they will see that they made a difference in someone's life.

The tenth construct: *general safe environment with policies and procedures* was seen as an enabler as these policies and procedures provide solid parameters that protected the well being of both the clients and the students, minimizing risk to all.

It is my job to make sure that all of this is done in a safe environment. I do believe that horrendous experiences will freeze people and that will not be great for transformational learning. For sure not now, and I'm even fearful about ever. It is my job to make sure that there is just general safety in place. The campers' safety, policies and procedures around things. They need to know how to handle a missing child, what to do when they are obliged to disclose information, what to do if someone is choking. All of those kinds of things.

The eleventh, and final, construct of a *supportive environment for students* was described to include the support provided by the supervisor, co-workers, resources, and information as well as infrastructural supports in policies and procedures.

The environment has to have the supports that the students need. That is not just about the coaching piece. It is also about the resources, the information they need. The people to ask that aren't just me, a peer group, a team leader. It really is about setting up the infrastructure too.

### Repertory Grid Results

Figure 75 illustrates how the supervisor rated each enabler of transformative learning (the construct) against each identified transformative learning example (the element).

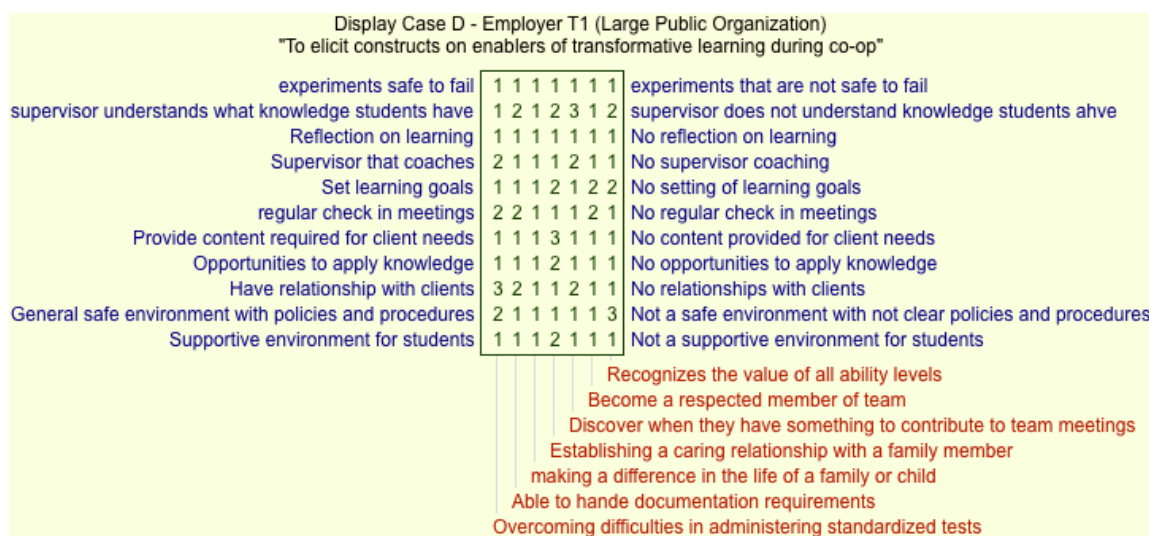


Figure 75. Repertory Grid Results: Case D Supervisor T1

Table 20 displays the statistical results from this rating of the constructs against the elements.

Table 20. Case D Supervisor T1 Mean and Standard Deviations of Constructs

	Standard Deviation= <math>\leq 1</math>	Standard Deviation=>1
Mean = 1 to 1.7	Very Useful Enabler— Consistently C1. Experiments safe to fail C3. Reflection on learning	Very Useful Enabler—Not as Consistent

	<p>C8. Opportunities to apply knowledge</p> <p>C10. General safe environment with policies and procedures</p> <p>C11. Supportive environment for students</p> <p>C4. Supervisor that coaches</p> <p>C7. Provide content required for client needs</p> <p>C5. Set learning goals</p> <p>C6. Regular check in meetings</p> <p>C9. Have relationship with clients</p> <p>C2. Supervisor understands what knowledge students have</p>	
<b>Mean = 1.8 to 2.5</b>	<b>Useful Enabler—Consistently</b>	<b>Useful Enabler—Not as Consistent</b>
<b>Mean= 2.6 to 5.0</b>	<b>Less Useful Enabler—Consistently</b>	<b>Less Useful Enabler—Not as Consistent</b>
	<b>Standard Deviation= &lt;/=1</b>	<b>Standard Deviation=&gt;1</b>

## Case D Supervisor T2

### Transformative Learning Elements: T2

The supervisor in Case D at T2 confirmed that the transformative learning experiences she had identified in T1 were still valid. She added one additional experience to her first set labelled *growth of self-awareness*. In the workplace, there are regular debriefing sessions with the students and the supervisor has been able to observe the student reflecting on his experiences and coming to terms with his own strengths and weaknesses in light of the challenges he has faced at work:

And that would be, being a lot more reflective and clear about recognizing your own strengths and weaknesses as an individual. Really getting to know yourself more through how you presented in your role . . . I'd say it has been in difficult moments, when something occurs. It is through conversation. I think it happens, and I don't want to make stories and assumptions on my own, but I see it happening through our conversations, our debriefs around really some of their own personal strengths, challenges, triggers. Self-awareness. It has been through incidences in their work where everybody brings their stuff to work. It is really difficult to completely disengage from that. In this world, we use ourselves as a therapeutic tool and these young individuals have very much done that as camp leaders as well, and so have students that I have supervised over the years. It is really knowing yourself more, self-awareness.



### **Transformative Learning Constructs: T2**

In reflecting upon the student's work term, the supervisor added one more enabler of transformative learning that she had observed. This was labelled provision *of resources/tools /space/materials/funds for job* (C12). The supervisor commented that a supportive environment was made up of three parts: a nurturing environment, training and physical resources. In T1, she had identified the nurturing and training components but wanted to add the third.

The nurturing, supportive environment from an HR point of view and humanistic point of view; the actual space, resources, materials, the funding, the tangibles; and the actual training. It doesn't matter to me whether they are separate or together, but I see them as three different things that enable.

### **Repertory Grid Results**

In addition to adding one element and one construct, the supervisor changed some of the ratings from T1. These changes did alter the statistics. An updated display and statistics is shown in Figure 76 and Table 21 with the changes for T2 displayed in red font as compared to T1 in black.

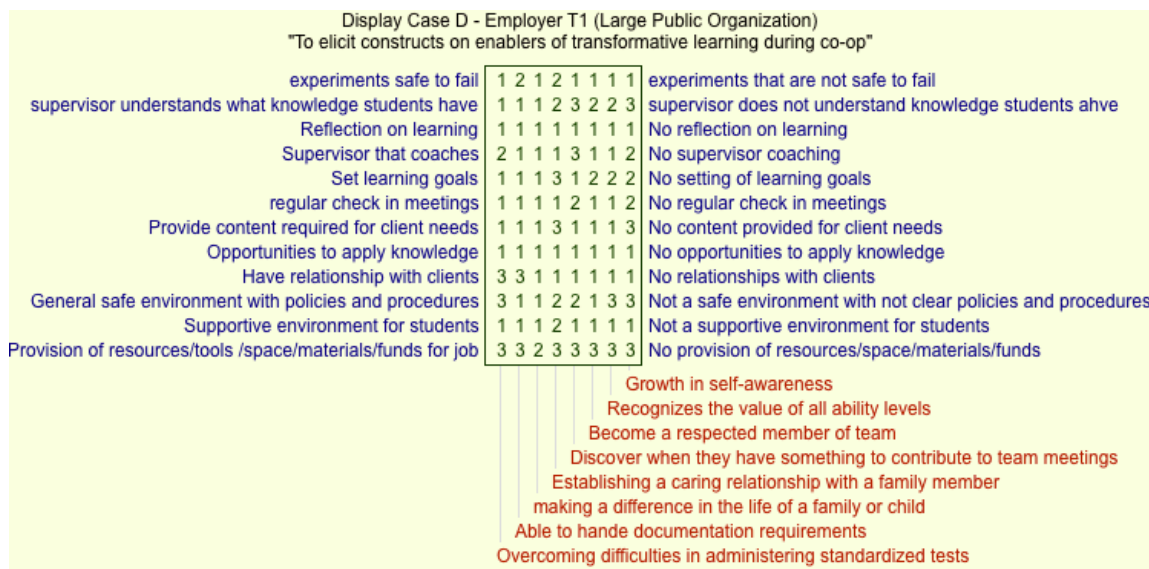


Figure 76. Case D Supervisor T2 Display

Table 21. Case D Supervisor T2 Means and Standard Deviations of Constructs

	Standard Deviation= $\leq 1$	Standard Deviation= $\geq 1$
<b>Mean = 1 to 1.7</b>	<b>Very Useful Enabler—Consistently</b>	<b>Very Useful Enabler—Not as Consistent</b>
	C1. Experiments safe to fail	
	C3. Reflection on learning	
	C8. Opportunities to apply knowledge	
	C11. Supportive environment for students	
	C4. Supervisor that coaches	
	C7. Provide content required for client needs	
	C5. Set learning goals	
	C6. Regular check in meetings	

	C9. Have relationship with clients	
<b>Mean = 1.8 to 2.5</b>	<b>Useful Enabler—Consistently</b>  C2. Supervisor understands what knowledge students have  C10. General safe environment with policies and procedures	<b>Useful Enabler—Not as Consistent</b>
<b>Mean= 2.6 to 5.0</b>	<b>Less Useful Enabler—Consistently</b>  C 12. Provision of resources/tools/spaces/materials/funds for job	<b>Less Useful Enabler—Not as Consistent</b>
	<b>Standard Deviation= &lt;=1</b>	<b>Standard Deviation=&gt;1</b>

Figure 77 shows the element and construct matches. The smaller the arrows on the right of the figure indicate a stronger match.



Figure 77. Case D Supervisor T2 Focus of Elements and Constructs

In reviewing the elements that were closely matched (*recognizes the value of all ability levels, become a respected member of the team and making a difference in the life of a family or child*), the supervisor explained their connection, yet difference:

Recognizing the value of all ability levels and making a difference in the life of a family and child, to me are very linked. They are externally focused. Becoming a respected member of the team, is a little bit more of an internal focus from my point of view. It is linked in the sense that you are a conduit, you are assisting, and you are doing your job in the most concrete sense. You are contributing to someone's life, but it is more internally focused.

The supervisor agreed that the constructs of *opportunity to apply knowledge* and *reflection on learning* were closely aligned, and formed part of a cycle of experience-reflection-experience. She stated that they were distinct constructs in that not everyone reflects on the knowledge they have applied.

The final two matched constructs of *supportive environment for students* and *experiments safe to fail* were also determined to be aligned, yet distinct:

Those safe to fail experiments, as a leader even, when you are preparing your daily menu, they have planned weeks of activities, they have learned to plan safe to fail experiments or activities for the campers, and even for themselves as leaders. And hopefully, they have done it in a way that they have felt supported by each other and by me.

In summary, despite some closely matched elements and constructs, the supervisor confirmed that while the alignment made sense they were distinct examples and enablers.

### **Narrative Analysis: T1**

An analysis of the supervisor's narrative revealed four latent themes that were *making a difference, learning, the value of all ability, and internal and external validation*. When working with children with disabilities, students have the opportunity to make a difference with those children and their families, through the application of their knowledge, establishing a "co-therapeutic" relationship and a "caring" environment.

They are remembering some knowledge, something they have learned, they have had the opportunity to do that hands-on application and they see that they have had an impact on the world, they have a ding in the universe so to speak.

On the second theme of learning, the supervisor commented that for students to apply learning their knowledge needed to go hand in hand with creating a caring relationship with clients.

It is about providing the situations where they can apply personally that knowledge, that intervention with folks. One of the ingredients in addition to knowledge is having the relationship.

Providing a safe and supportive climate was described as critical to empowering the students to develop these personal, and often emotion-laden, relationships.

They feel safe, they feel that they are going to do that stretch and put their learning moment out there. Almost always there is more success, and things that they would do differently next time, so you really focus on that to make sure they are empowered, feeling confident, and acknowledge what went really great and maybe look at the learning stretch for next time.

The supervisor identified the following ways in which she created a safe environment for learning: having the student set learning goals so that they were “in control” of their learning, regular “reflective” practice, providing “resources,” “information,” “training,” feedback and “coaching.”

The third theme, *the value of all ability*, was described by the supervisor as:

Meeting someone at whatever their abilities are and respecting that individual, that child, that family for where they are at and trying to move forward from there.

This core value was something held dear by the supervisor who saw it as a sign of success when expressed by the students.

It is when I see in someone’s heart, soul and mind, the value of everyone, the value of all ability.

The final theme related to the student’s validation. Validation came from fellow team members who valued the student’s contributions as a collaborator.

They contribute their knowledge, their recommendations, whatever, that is pretty powerful to be seen as a respected member of the team. That I have seen more than once. It is one of the things that we require. It is about being valued. It is about intercollaborative practice.”

**Narrative Analysis: T2**

In T2, the narrative themes were further expanded. The supervisor compared the result of making a difference to being akin to a calling. She noted that it could be so rewarding that it fuelled the desire to continue working in this area.

That feeling when you make a difference in someone's life is incredible. It is an incredible feeling, a profound difference in their life, not a small little thing. And you don't forget it. And you do strive for it again and again. . . . It is sort of like a calling.

Within the theme of learning, the supervisor reiterated the importance of a *safe and supportive environment* that not only allowed the student to try "safe to fail" experiments, but to role model a similar approach to the children in their care and to themselves:

They have learned to plan safe to fail experiments or activities for the campers, and even for themselves as leaders.

*Valuing all abilities* was in evidence with the student over the course of the term:

There is a new value for kids of all abilities. I think it has deepened. I don't think it wasn't there. . . . It has deepened.

The importance of this to the student's ability to be effective, was further explicated in the next quote:

What we do, to be honest, in our work, the literature reflects that the clients that we work with don't actually change very much in their actual skill levels, what

changes is the capacity of those around them in understanding their value and adapting the environment and coming to a place of acceptance and value.

The theme of *validation* was expanded to include the student's internal validation of his contributions as a respected team member:

I see that as "I'm valuing myself, as a respected team member," not because people are saying it.

This internal validation came with heightened self-awareness that occurred as a result of the student's reflection and work performance:

Being a lot more reflective and clear about recognizing your own strengths and weaknesses as an individual. Really getting to know yourself more through how you presented in your role.

### **Data Interpretation and Discussion: Supervisor Case D T1**

The supervisor's constructs map onto the areas of the activity system triangle as illustrated in Figure 78 and described as follows:

1. Tools (the means by which the activity takes place): From WIE program and workplace: *reflection on learning* (C3) and *setting learning goals* (C5). From the workplace: *experiments safe to fail* (C1), *providing content required for client needs* (C7) and *opportunities to apply knowledge* (C8);
2. Subject (the supervisor): *supervisor that understands what knowledge students have* (C2), *supervisor that coaches* (C4) and *supportive environment for students* (C11);



3. Rules (the cultural norms, standards, guidelines): From the workplace: *regular check in meetings (C6)*, *safe environment with policies and procedures (C10)*, and *supportive environment for students (C11)*; and
4. Community (socio-cultural environment in which the activity takes place): From the workplace: *have relationship with clients (C9)* and *supportive environment for students (C11)*.

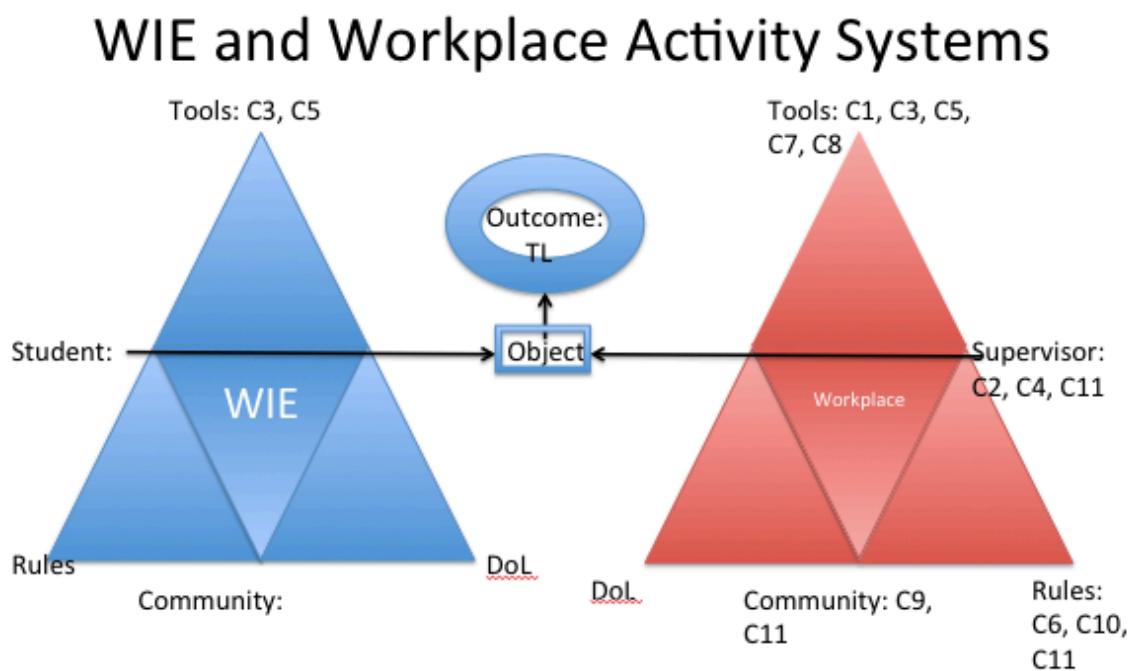


Figure 78. Case D Supervisor T1 Activity Systems With Construct Mapping

### Dynamic Nature of Activity Systems

With Case D supervisor in T1, the dynamism within the WIE system is found in the Subject-Object-Tools (SOT) sub-triangle, as shown in Figure 79. The tools that the student identified from his WIE academic program were *reflection on learning* (C3), and *set learning goals* (C5). These constructs were tools that the student used to foster the critical reflection that led to transformative learning.

## Dynamism within WIE Activity System

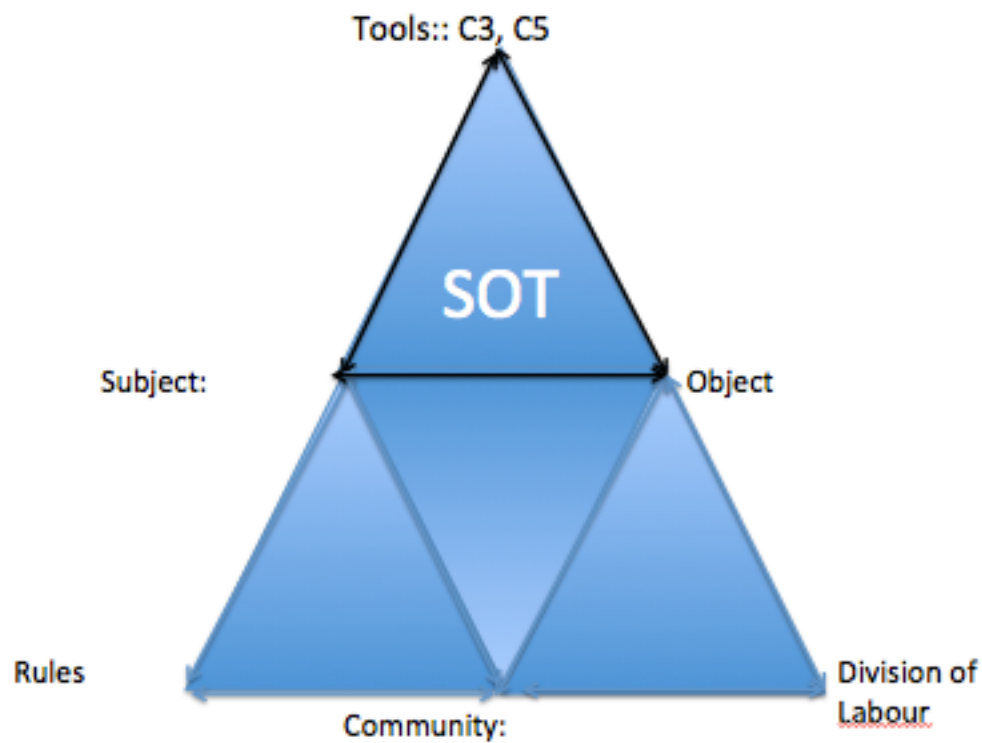


Figure 79. Case D Supervisor T1 Dynamism Within WIE System

The dynamic nature of the workplace system is also evident in Figure 80.

## Dynamism within Workplace Activity

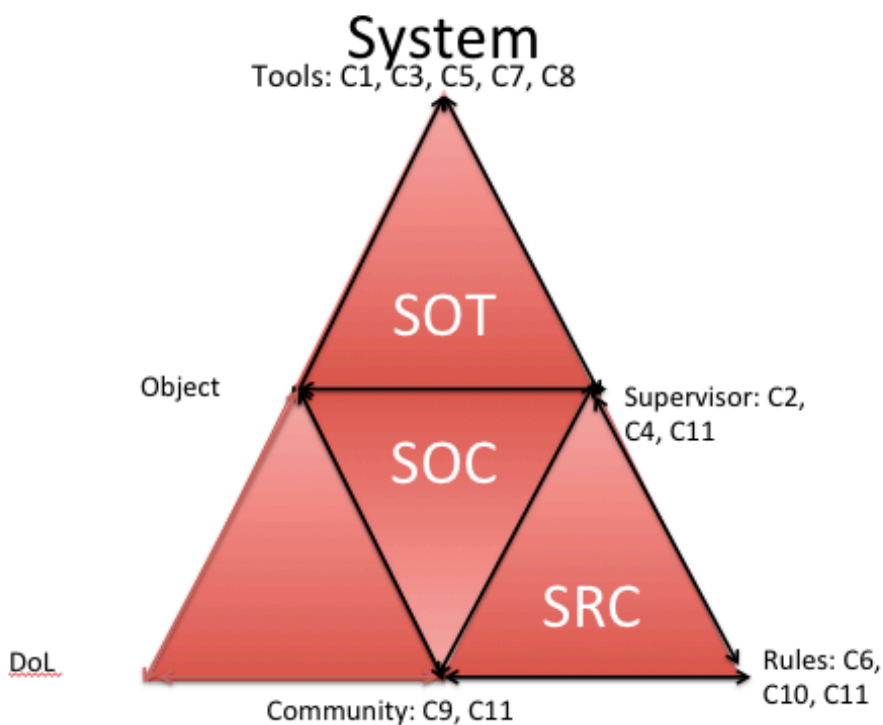


Figure 80. Case D Supervisor T1 Dynamism Within Workplace System

This figure shows that there are three sub-triangle areas of the workplace system that seem to be the most dynamic. These are: the Subject (supervisor)-Object-Tools (SOT), Subject (supervisor)-Object-Community (SOC) and Subject-Rules-Community (SRC) sub-triangles. With respect to the SOT sub-triangle, the tools of *experiments safe to fail* (C1), *reflection on learning* (C3), *set learning goals* (C5), *provide content required for client needs* (C7) and *opportunities to apply knowledge* (C8) enabled transformative learning through the dynamic relationship these tools had with the work term object.

The student was given opportunities to apply his knowledge to the task requirements with “experiments” that were safe to fail. The supervisor supported the setting of learning goals and the student’s reflection, and by so doing supported the student’s critical reflection on his performance. Being afforded opportunities to work

independently and having relevant course learning to apply allowed the student to stretch into his role, again allowing for transformative learning. The supervisor who *understands what knowledge the students have* (C2), *coaches* (C4) and who helps to create a *supportive environment for students* helps to set the positive emotional context at the student's workplace. The conditions of providing time and value to reflection, institutional requirements and a supportive environment (Hanson, 2013) are all amply met in this case in which there were ample opportunities for critical self-reflection, and subsequently, transformative learning.

In the SOC sub-triangle the importance of the community becomes evident in the enablers of *have relationship with clients* (C9) and *supportive environment for students* (C11). Working in a supportive environment that allowed for relationship building and interactions with clients provided the student with the relational epistemology (Taylor, 2005) that contributed to his relational agency (Edwards, 2009) and, hence, the confidence to do his work and to try new things with clients.

The constructs of *regular check-in meetings* (C6), *general safe environment with policies and procedures* (C10) and *supportive environment for students* (C11) are active in the rules component of the workplace activity system. The SRC dynamism comes about through the interaction of the supervisor who understands what knowledge the student has, and is willing to coach and to create a supportive environment. The tensions amongst the three dimensions of this sub-triangle enabled the student's transformative learning experiences and this was connected to his realization that he had something to offer the team to help them progress. He also had some insight into how those positive relationships with clients allowed for his transformative learning about their needs. These

are examples of expansive learning described by Engeström (1987) that leads to transformation.

### **Strength of Constructs**

The strength of the relationship of the constructs against the elements was mapped as in the previous cases. In this case, the supervisor rated all of the constructs very highly so that each one was being categorized as “very useful—consistently.”

### **Connectivity Between Systems**

Figure 81 illustrates the connectivity between the WIE academic and the workplace activity systems. In the case of this supervisor Case D at T1, and similar to previous cases, the constructs of *reflection on learning* and *setting learning goals* connect both the WIE program and the workplace. The WIE academic program requires the setting of learning goals and reflection, both of which are based on what occurs on the work term. These program requirements provide points of connectivity between the two systems.

## WIE and Workplace Activity Systems: Situative and Enactivist Perspectives

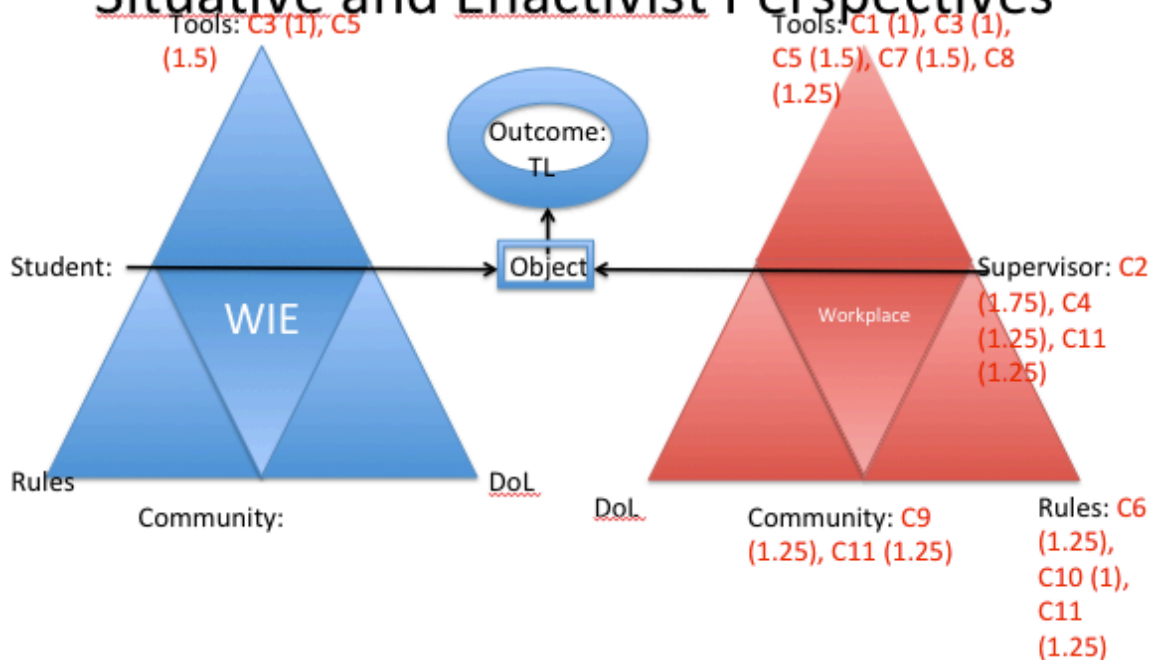


Figure 81. Case D Supervisor T1 Connectivity

### Data Interpretation and Discussion: Supervisor Case D T2

The additional construct, C12: *provision of resources/tools/space/materials/funds for job* fit onto the tool component of the workplace activity system. This change is noted in Figure 82 of the two WIE academic and workplace systems.

## WIE and Workplace Activity Systems

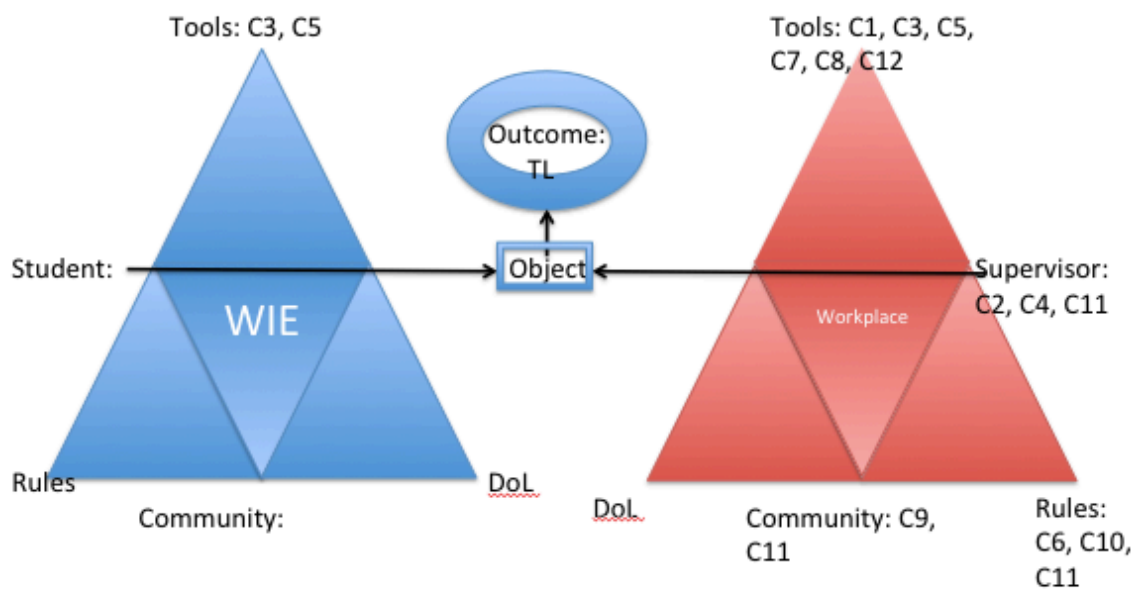


Figure 82. Case D Supervisor T2 Activity Systems With Construct Mapping

### Dynamism in the Activity Systems

There were no changes to the WIE activity systems, and as such the dynamism remains the same as in T1. In the workplace activity system, the sub-triangle SOT has become intensified with the addition of the rule construct of *provision of resources/tools/space/materials/funds for job*. These critical resources have a direct impact on how the work is acted upon and are identified as enablers of transformative learning.

### Strength of Constructs

The supervisor did change some of the ratings given to constructs in T1 and, with the addition of one construct and one element, effected how the strengths of constructs

mapped onto the activity systems. This resulted in the addition of “useful” and “less useful” categories of constructs. A change from T1 was that C2 *supervisor understands what knowledge students have* and C10 *general safe environment with policies and procedures* was no longer rated as highly, moving from “very useful” to “useful.” The new construct of *provision of resources/tools/ space/materials/funds for job* was rated such that it was added to the “less useful” strength category. What this demonstrated is that over time from the perspective of the supervisor, the more operational constructs, (i.e., policies and procedures and resources and materials) were deemed not as important as they were at T1. As these constructs are pre-conditions for a successful work term, they may have lost their significance as the term progressed and other dimensions of reflection and support continued to be significant towards supporting transformation.

### **Strength of Constructs: Based on Experience Perspective**

The constructs were also mapped onto the activity systems through the lens of the various experiences that the supervisor had observed in the student, whether constructivist, critical cultural, psychoanalytical, situative, or enactivist. For the “constructivist” experiences the supervisor observed the student as *able to handle documentation requirements and overcoming difficulties in administering standardized tests and* all of the constructs were rated as “very useful” and “useful.”

For the critical cultural experience, the supervisor observed that the student *recognizes the value of all ability levels* and all of the constructs, except C10, *general safe environment with policies and procedures* were rated as very useful or useful enablers.



In T1, the supervisor did not identify any experiences that were in the psychoanalytical category, however, in T2, she added the experience of *growth in self-awareness, which* was categorized as psychoanalytical.

Regarding the situative experiences of *become a respected member of the team* and *discover when have something to contribute to team* as well as the enactivist perspective of *making a difference in the life of a family or child* and *establishing a caring relationship with a family member*, all of the constructs were rated “very useful” and “useful.” These perspectives, with the additional T2 element, were categorized based on Fenwick (2000) and shown in Table 22.

Table 22. *Case D Supervisor T2 Elements*

<p style="text-align: center;"><b>Constructivist</b></p> <ul style="list-style-type: none"> <li>• Able to handle documentation requirements</li> <li>• Overcoming difficulties in administering standardized tests</li> </ul>	<p style="text-align: center;"><b>Critical-cultural</b></p> <ul style="list-style-type: none"> <li>• Recognizes the value of all ability levels</li> </ul>
<p style="text-align: center;"><b>Psychoanalytic</b></p> <ul style="list-style-type: none"> <li>• <b>Growth in self-awareness</b></li> </ul>	<p style="text-align: center;"><u>Situative</u></p> <ul style="list-style-type: none"> <li>• Becoming a respected member of the team</li> </ul> <p style="text-align: center;"><u>Enactivist</u></p> <ul style="list-style-type: none"> <li>• Discover when they have something to contribute to team meetings</li> <li>• Making a difference in the life of a family or child</li> <li>• Establishing a caring relationship with a family member</li> </ul>

### **Connectivity between WIE and Workplace Activity Systems**

In T2, the connectivity between the two systems remains the same as in T1

### **Summary of Comparison of Case D Supervisor between T1 and T2**

In T2, the supervisor added one element (*growth in self-awareness*) and one new construct (*provision of resources/tools/space/materials/funds for job*). She did change some of the ratings given previously. The change in the internal dynamism of the

workplace activity systems was intensified with the additional construct. The mapping of the constructs onto the experience perspective changed for all experiences, and a new perspective “psychoanalytical,” was added. The connectivity between the WIE academic and workplace activity remained the same.

### **Integration**

The final component of the T2 interview was to explore the idea of integration of the transformative learning into the workplace and back into the WIE academic program. The supervisor gave an example of how the enabling constructs of *providing content on client’s needs, a safe environment* and *opportunities* enabled integration into the workplace as well as transformational learning.

Another example is seizures. We had a whole morning on how to manage seizures. There were kids who had seizures and they managed them beautifully, because they had the knowledge and they had the opportunity to practice and they had a safe environment to talk about it.

The supervisor commented on that over the term she had observed that the students in the workplace had developed a deeper appreciation for the children who were involved in the programs and that this not only benefitted the program but also created a profound, lasting, self-formative (Dirkx, 2011) change in the students working there:

I do believe that they have developed deep and genuine, authentic, caring professional relationships with these campers that I don’t actually, and this is an assumption, because no one has told me this, but I am fairly certain that they didn’t think they would. They were going to be leaders and clients. And it is not

that they are not. They are very professional. There is a new value for kids of all abilities. I think it has deepened. I don't think it wasn't there, because these are very caring individuals, or they wouldn't have been here in the first place. It has deepened. . . . That feeling when you make a difference in someone's life is incredible. It is an incredible feeling, a profound difference in their life, not a small little thing. And you don't forget it. And you do strive for it again and again. I have lots of parents that say to me over the years, this isn't a job. I mean, "this area." It is sort of like a calling.

In addition, the supervisor noted that during a particularly challenging two-week period, the transformative learning of the student led to organizational learning, an interconnected process (Tuomi-Gröhn et al., 2003) as she identified areas in the organization that needed to change:

This organization, I'm taking that, we worked hard during that two weeks and I worked hard to support them during those weeks to maintain safety, to maintain positive experience for the group and to manage the individuals that were having the most challenges in fair, equitable, and affirming ways, but within the boundaries of having responsibilities to the group. Because of that, I niggled before, I'm absolutely positive that some changes need to happen in our organization, so that learning has helped us.

This integration is depicted Figure 83.

## Integration of Outcome Between WIE and Workplace Activity Systems

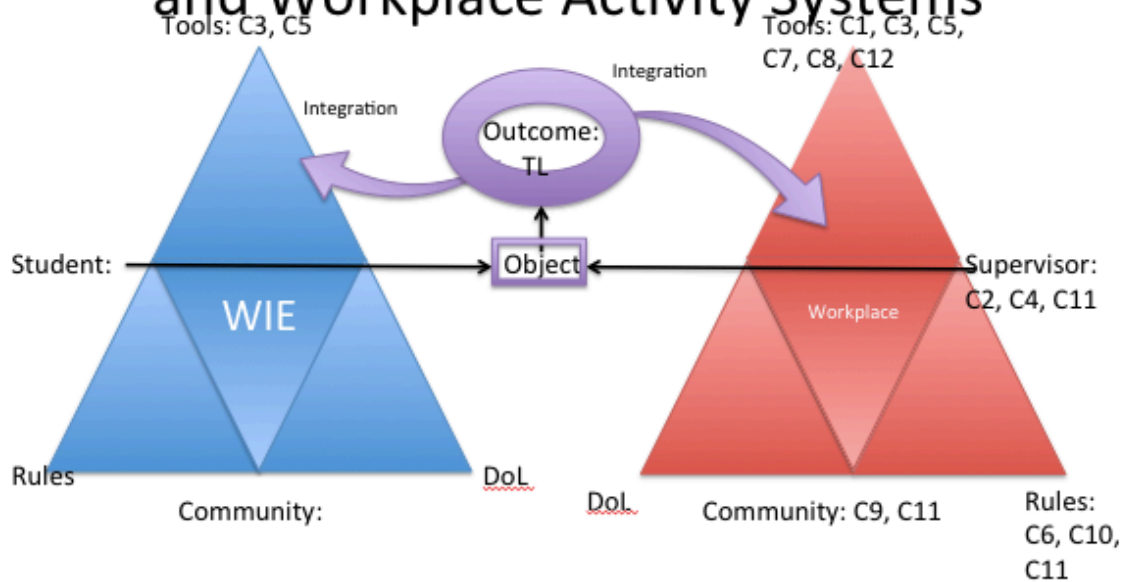


Figure 83. Case D Supervisor Integration

### Summary of Findings for Case D: Combined Student and Supervisor

In summary, there are some commonalities in the elements identified as being transformative learning moments from both the supervisor and student's perspective. The first theme was that of *recognizing the individual ability levels of each child* and appreciating what that meant for the individual needs of that child. The second relates to the student *developing self-awareness* and the awareness of his motivation to succeed. The third theme involved *making a valuable contribution* to the team. The fourth theme is about *making a difference* and how the student's actions can contribute to that.

There are seven common themes among the constructs elicited from both the student and supervisor in Case D. The first theme is *reflection*: the supervisor referred to this as the student reflecting on their learning and the student explicitly commented on his use of a reflective journal. The second theme is *learning goals*. The supervisor referred to the setting of learning goals and the student commented on his establishment of learning goals and assessment of competencies. *Team reflection* is the third common theme. The supervisor identified check-in meetings and the student commented on the opportunity to reflect with his team as part of this theme. The fourth theme is *applying knowledge* and is derived from the supervisor identification of the opportunity to apply knowledge as an enabler. The student commented on his application of problem-solving, critical thinking and relevant learning as part of this theme. The fifth common theme is *client contact* that the supervisor referred to as having a relationship with clients. The student commented on the importance of feedback from clients to enable his transformative learning. The sixth theme is *supportive environment*, and is derived from three of the supervisor's constructs: *policies and procedures*, *a supportive environment* and *resources for the job*. The student articulated this theme through his constructs of *feeling supported*, *feeling respected* and *seen as capable*. The final common theme is *supervisor that coaches and motivates* which is formed as a result of the supervisor's construct of *supervisor who coaches* and the student's construct of *motivating supervisor*. In this case, the supervisor rated these common constructs more highly than the student.

These common constructs were mapped on to the WIE academic and workplace activity systems in Figure 84 with the supervisor's constructs in black and the student's printed in red font.

## WIE and Workplace Activity Systems:

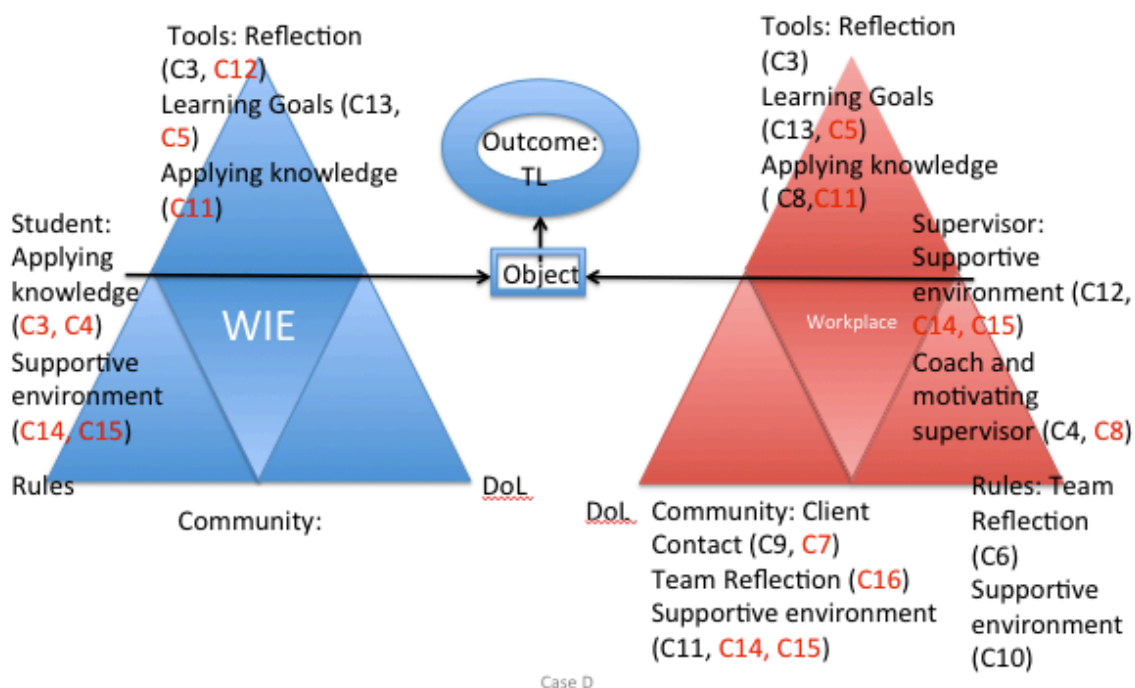


Figure 84. Case D Comparison of Student and Supervisor Construct Themes

Figure 85 shows the congruence or overlap of the two activity systems. In Case D, this congruence seems to emanate from the tools of reflection, learning goals and applying knowledge and the supportive environment that occurs in both the WIE academic and workplace systems. What this congruence suggests is that both the supervisor and the student share an understanding of these boundary-spanning connections (Engeström, 2009) that make for strong linkages between the two subjects and their mutual systems.

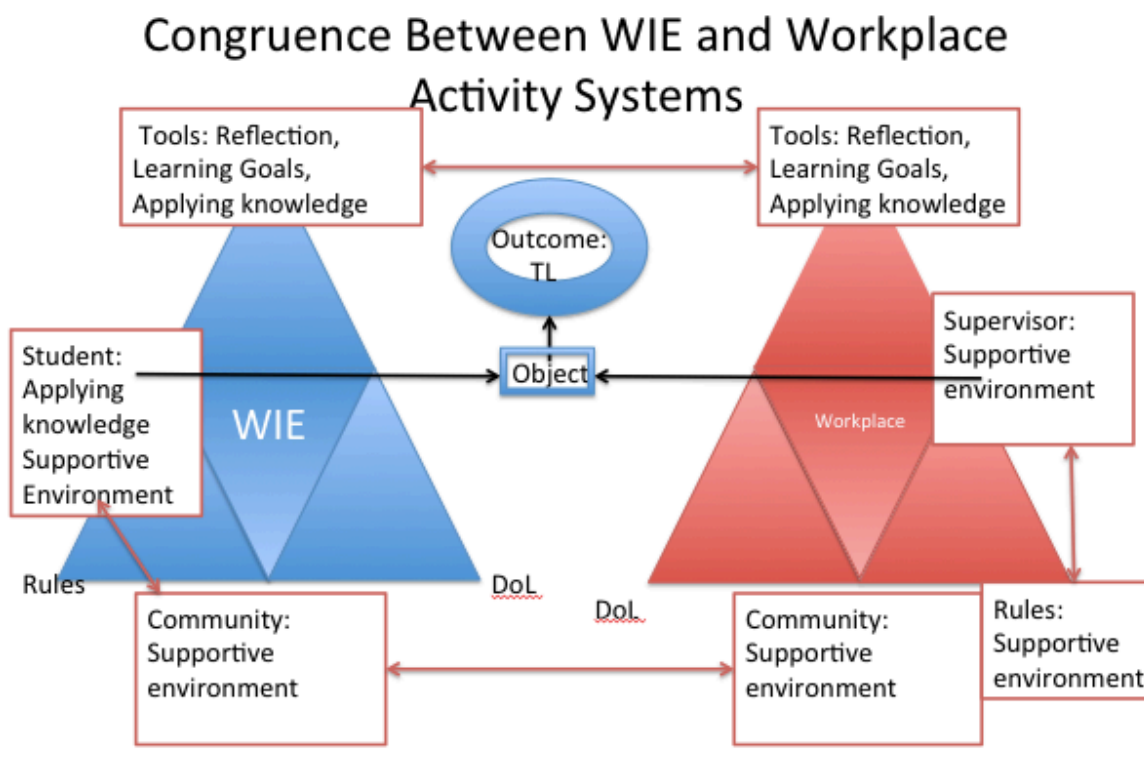


Figure 85. Case D Congruence

The final area of congruence comes from the views of the supervisor and the student on the integration of the transformative learning back into the workplace and WIE academic program. For the supervisor, she saw the workplace having been altered by the student's transformative learning in the area of making a difference in the life of a family or child. This difference resulted in improved programming and would have lasting effects for the student, an example of co-configuration (Avis, 2009; Engeström, 2009). For the student, the learning gained regarding working with a team, networking, applying learning and all were seen as integrating into the workplace and back into the WIE academic program for the betterment of both and demonstrated the outcome of knotworking as one of the interactions of activity systems (Engeström, 2009).



In summary, there are many areas of overlap between the student's and the supervisor's perceptions, both of the transformative learning experienced by the student, and the enablers of that learning. The safe environment, opportunities to interact with clients, reflective practices, and a coaching supervisor reflects a workplace with a transformative orientation (Van Gyn & Grove-White, 2011). These features allowed for the narrative, systemic and organizational critical self-reflection (Mezirow, 1998) that enabled both personal and social transformation (Dirkx, 2011; Merriam et al., 2007). Furthermore, there was congruence between the two subjects' view of the connectivity between the systems' tools, community and subjects that added to the boundary spanning, co-configuration and knotworking occurring between these two systems (Engeström, Engeström, & Vähäaho, 1999).

Finally, both supervisor and student agreed that the transformative learning gained in the workplace benefitted the workplace and would benefit the WIE academic program. The enablers of the transformative learning appear to be enabling this integration and system improvement, demonstrating both individual and social transformation (Taylor, 2008).

### **Case A-D Coordinator**

The Co-op coordinator for this program, from which all participants for this study were drawn, and the interview participant providing the WIE academic program perspective, has been working with the program for over ten years. The main responsibilities of the coordinator are to:

1. Identify and secure appropriate work placements;

2. Work with faculty and administrators in the WIE academic program to ensure integration of the work term experience with the academic curriculum;
3. Guide and support implementation of administrative processes in the WIE academic program to enable the WIE work placements;
4. Work with potential employers to prepare them and their administrators and supervisors for the work term, on both an administrative and educational level;
5. Prepare students, in this case through a required course, for the work term;
6. Provide guidance and support for students regarding curriculum issues and work term issues;
7. Assess student performance in the work term setting; and
8. Assess the efficacy of the workplace after work term completion.

### **Results from Interviews: WIE Coordinator T1**

#### **Transformative Learning Elements**

The coordinator identified eight examples of student transformative learning that she had witnessed over the years from her extensive interactions with WIE students. The first of these is labelled: *gaining understanding of broad socio-economic conditions faced by others*. The coordinator explained:

One would definitely be around socio-economic. That has happened many times for us. The examples are usually day camps or after school. Child-based settings where they realized that children's life circumstances are not like theirs. It is usually around food, safety and security needs (housing and sleeping and/or

parents). Single parents or parents who have been incarcerated, those kinds of things. That has been big shifts for many people.

The second element involved the student's growth in level of self-confidence and is labelled *confidence in self*. This element was described in a way that meant more than being confident, but rather more aware of, comfortable, and content with being who they were.

Probably, without exception, they shift in their awareness of who they are as individuals over the course of the time they are with us. That is partly more maturity as they age, but also in the way they are as people in life, just seems to shift around feeling confident and competent. Some of them are inherently very confident, but not all. Even if they are, they have a bigger awareness of others around them. I feel that by the time they leave the university, many of them have a better sense of "I'm okay, just being me. I don't have to be somebody else."

The third element is labelled *realization that had knowledge to share*. The coordinator provided the following illustration of this transformative learning:

Something to share, often kinesiology students in the clinical setting will be asked to talk, at a morning "muffin time" where they do basically mini rounds with the clinical staff on a particular treatment plan. Around shoulder injuries or knee injuries or pain management or something. They realize that they know something as they go and delve into developing that. That is cool for them.

A fourth element of transformative learning is *realization that there are different ways to demonstrate leadership*. The coordinator described having the students be

exposed to different leadership styles allowed them to experience this transformative learning:

That sometimes leadership doesn't mean telling the kids what to do, and how to do it. . . . Seeing different styles of leadership. That is probably the better theme. Leadership doesn't have to be in one way, it can happen in many ways.

The fifth element *ability to move past comfort zone* was identified as a transformative learning experience for students. The following example illustrated this learning.

We try to encourage the students, depending on what they are doing, to do things that are outside of their own comfort zone, or what they think is their own comfort zone, to put themselves in the shoes of their clients, the kids, the participants they are working with. That often leads to "aha" moments.

The sixth element of *greater understanding of complex patient/client motivations and needs* was identified as another transformative learning moment. Students on work terms were often exposed to a range of work situations and lifestyles faced by their clients. Many of these novel contexts are not pleasant or easy conditions within which to live and work. Being exposed to this reality, and the learning about how this reality might effect recovery, was described in the following way:

Trying to understand what their patient's daily life would be like if they were to go back to work is just a huge insight for the students. They often haven't had parents who have done that kind of work. "I guess, wow, maybe that is why it might be part of the reason why people don't want to get well."

Many of the students in this program have work terms in international settings. This gave rise to the seventh element of *gaining cross-cultural awareness*.

When students go to Wales, that is often a big wake up around lots of different ways of being. International. They led with a whole bunch of other leaders and they come to a realization that Canadians don't do everything perfectly and others might have other ways of sharing. That is an example of it.

NM: Gaining cross-cultural awareness.

Yes. I'd say that happens almost any time somebody goes overseas. It doesn't matter where they go.

The final, and eighth, element identified by the coordinator was *awareness of issues related to disability*. Many of the students work with clients who have a disability, and frequently this is a new experience for the students. The transformative learning that arose as a result of work with these clients was explained by the coordinator:

Almost always there are insights from all of our students around children with disabilities at some point. The theme around learning that having a disability doesn't limit you, it is the people around you that limit you. It is not as hard to work with someone with disabilities as they thought, they are just like anyone else. That is a huge insight for them. They are kids first, their disabilities are second. Or adults first and disabilities second. Realizing that they are not much different, their clients, or their patients, or their participants are not much different than you or I. "They are cool too." They really get that working with seniors or

working with children with disabilities. That is a big awareness for them. Big awareness for them.

### **Transformative Learning Constructs**

In considering the enablers of the transformative learning the coordinator identified fifteen constructs. The first of these was *high level of self-reflection required*. The coordinator identified a number of ways in which reflection could happen, but regardless of the manner, some degree of reflection was seen as an important enabler to transformative learning:

I also think that some of it just happens when a student has the maturity to recognize it. The students who take writing their work reports fairly seriously. We have some students who are really good at journaling and use that as a means to help them understand their learning. When they look back, they realize, “Wow, I did really come across, or found I learned something of significance.”

The coordinator went on to explain that not all students had the skill or inclination to be critically reflective, but regardless, this reflection was an enabler of transformative learning.

Some they don't have the skills to. Some of them don't have a desire too. But it is not without merit regardless. For some of them it takes longer to figure out how to do it. It is their third or fourth work term and some of leap into it with both feet right away.

The second construct, *high support from supervisor*, reflects the coordinator's comments that a supportive supervisor can be a powerful enabler of transformative learning experiences.

I think they happen in a whole bunch of ways. Some of them are facilitated by an employer.

The coordinator gave several examples of this support as evidenced in encouragement from supervisors, opportunities to try new things, and having trust in the students' capabilities.

The third construct of *much opportunity to try new things* was described by the coordinator as an enabler in that encouraging students to try things that they would not have tried before, and encouraging them to move a bit past their own area of comfort, as stated, often resulted in transformative learning.

The fourth construct of *high requirement to understand socio-economic context* was seen to be an enabler as that understanding helped prepare them to appreciate the different backgrounds of the clients they would be dealing with, and as such learn more from those encounters.

Or it could be incidences in actual events that happen. We often will have a student who is working with kids that don't come to programs having had breakfast and they don't know why. They find that their behaviour is annoying. When they spend some time probing that, they find that many kids don't eat, because they don't have the means for that. That is always an eye-opening experience.

The fifth construct of *strong orientation to workplace* was explained as being an enabler of transformative learning by providing the student with a good understanding of the workplace, roles and responsibilities, and how to interact with their supervisor. An orientation that covered these components, especially within the first two weeks of the work term were identified by the coordinator as crucial elements to guide the student on an effective path for learning:

That is a make or break time in my experience. A student who has developed a really strong understanding of the organization, of their role, and relationships with their supervisors, within that first two weeks, it doesn't matter if they are working part time or full time, those who have had that initial great experience, most often go on into good work experiences. The other side doesn't mean that they always don't have a good work experience, but it is more challenging.

The sixth construct involved the notion of time and is labelled *long time commitment*. This idea of time includes the time a student spends in their academic program, at the workplace, and time taken after their academic or workplace experience as a way to synthesize their learning.

Time. I think time in many ways, the time it takes for that a student to do their degree. Hindsight because you have thought back two or three years in your past. I think time in an experience and again away from the experience. When students have had difficult moments you can often help share some insights right then and there. But it is two or three months, or two or three years later that they can lose some of the emotional connection to a difficult moment and realize that it is okay



to make mistakes. Time is a healer. Time is an opportunity to integrate. We all want to have students take what they learn in the classroom and apply it in the workplace. But that takes a bit of time to settle. . . . They have to build their abilities over time. It just takes some time to do that. They might have all the good theory in the world, but it takes a while to really integrate that at every level.

The coordinator identified the role played by herself and/or the workplace supervisor in framing incidents for the student to help them reflect upon, and make sense of the event. According to the coordinator, it is this framing that enables transformative learning and was the seventh construct *extensive support of framing incident by coordinator or supervisor*.

Some of those moments would be, for example, during a site visit when the student brings up an incident of some sort or something that happened, and either the employer or I frame that, either in adding information or discussing how it sounds like it might have been something they have taken in their classes, or probing for clarification to try and find different words. That is one time in which it happens.

After the completion of a work term, students in the program must participate in a poster session where they summarize the work they did and explained, in a poster format, the knowledge, skills, and attributes gained on the work term. This session is attended by fellow students and faculty. This was viewed by the coordinator as an enabler of transformative learning, as it provided another opportunity for reflection, with the added

dimension of dialogue on the experience. This eighth construct was labelled *opportunity to share learning with fellow students or faculty*.

Then again, although our poster presentations which is what we do for debriefing isn't really formal, super formal, they do get a lot of self-awareness and self-satisfaction of having talked to others. "Oh you did that? That sounds cool." "Oh, I guess it was cool. Or I guess it was interesting. Here is what I got to do and here is what I got to learn." We have some faculty members who are great of talking, not just of co-op specifically, but they know the students well enough and their experiences, "oh you worked here this summer" and they bring that into the classroom.

The ninth construct of *high level of self-confidence required* reflected the coordinator's comments that having a high level of confidence enabled the student to realize that they had something of value to contribute on the workplace which, in turn, opened up more opportunities for them to have transformative learning moments:

We have a lot of students whose confidence becomes part of what they get aware of and more capable of, demonstrating that they know something or feeling that they have something to contribute.

The tenth construct of *meaningful feedback on capability* came about after one particular experience with a student. In this example, the student lacked an perspective on her own capabilities and, after both her supervisor and coordinator provided her with meaningful feedback on her capabilities, there was a distinct shift in her understanding.

During her last summer, both her employer and I spent a fair amount of time trying to convince her that it didn't matter. When she was working with kids in the day camp, she didn't have to be the leader that stood on the top of the table. She might need to learn that kind of capability, but that every child would react differently to leaders like that and it was really good to have a quiet, gentle leader that would bring the group together in a different way...I said to her, "How are you feeling about things now?" And she went, "I really got it... I get that I don't have to be a leader like everybody else."

The eleventh construct of *feels highly valued on work term*, was seen as another enabler that gave rise to transformative learning by setting the condition at the workplace where the student felt safe to contribute their ideas and work because they were inherently valued as part of the workplace. This was stated as follows:

It is whether a student feels valued.

The twelfth construct of *strong relationship with workplace colleagues* was referred to by the coordinator in several examples of students working with colleagues, or learning how to manage both personal and professional relationships with colleagues of a similar age. The enabler was summarized as follows.

I think it is developing relationships. No matter how technological we get, it is the relationship building at all levels that always makes a difference.

Both the thirteenth construct of *strong relationship with supervisor* and the fourteenth of *supervisor has strong coaching/mentoring skills* were described in the following way by the coordinator as enablers:

The development of a relationship with their supervisor. That often involves coaching of either the student and/or the supervisor.

The fifteenth construct of *student has extensive workplace experience* was derived from a commentary on graduate and undergraduate students and how the former, who have work experience in teaching, for the most part, have a broader worldview as a result of their work experience. This perspective appears to enable them to have transformative learning experiences as they consider their existing worldview and broaden it.

All the rest is literally broadening the worldview.

Furthermore, the graduate students have two work terms sequentially, and this feature enables them to build from one onto the other and be open to more transformative learning through this process:

The coaching students they only do two experiences. It is almost always back-to-back. It is almost always with the same students, or athletes or whatever. They are so much richer in their experiences the second time around, because they understand.

### **Repertory Grid Results**

Figure 86 shows how the coordinator rated each enabler of transformative learning (the construct) against each identified transformative learning example (the element).

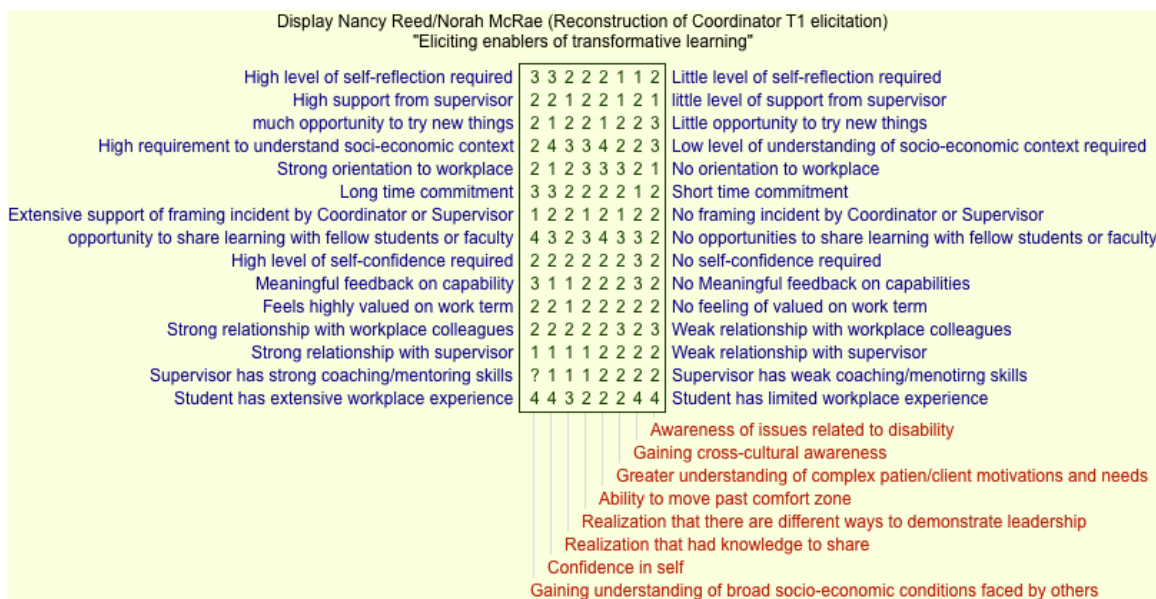


Figure 86. Repertory Grid Results: Coordinator T1

Table 23 displays the statistical results from this rating of the constructs against the elements.

Table 23. Coordinator T1 Means and Standard Deviations of Constructs

	Standard Deviation= <math>\leq 1</math>	Standard Deviation=>1
Mean = 1 to 1.7	<p style="text-align: center;"><b>Very Useful Enabler— Consistently</b></p> <p>C13. Strong relationship with supervisor</p> <p>C2. High support from supervisor</p> <p>C7. Extensive support of framing incident by coordinator or supervisor</p> <p>C14. supervisor has strong coaching/mentoring skills</p>	<p style="text-align: center;"><b>Very Useful Enabler—Not as Consistent</b></p>

<p><b>Mean = 1.8 to 2.5</b></p>	<p><b>Useful Enabler—Consistently</b></p> <p>C11. Feels highly valued on work term</p> <p>C3. Much opportunity to try new things</p> <p>C1. High level of self-reflection required</p> <p>C10. Meaningful feedback on capability</p> <p>C9. High level of self-confidence required</p> <p>C6. Long time commitment</p> <p>C5. Strong orientation to workplace</p> <p>C12. Strong relationship with workplace colleagues</p>	<p><b>Useful Enabler—Not as Consistent</b></p>
<p><b>Mean= 2.6 to 5.0</b></p>	<p><b>Less Useful Enabler—Consistently</b></p> <p>C4. High requirement to understand socio-economic context</p> <p>C8. Opportunity to share learning with fellow students or faculty</p> <p>C15. Student has extensive workplace experience</p>	<p><b>Less Useful Enabler—Not as Consistent</b></p>
	<p><b>Standard Deviation= &lt;/=1</b></p>	<p><b>Standard Deviation=&gt;1</b></p>

## Results from Interviews: Coordinator T2

### Transformative Learning Elements: T2

In the T2 interview, the coordinator confirmed that the transformative learning examples and enablers given in T1 were still valid. No additional elements or constructs were added in T2.

### Transformative Learning Constructs: T2

The only change to the constructs in T2 was that the rating for the construct of *high requirement to understand socio-economic context* against the element of *ability to move past comfort zone* strengthened from a 4 to a 2. As a result of these changes, new statistics were calculated as a result, the strengthening of this construct moved it from the “less useful” to the “useful” category. Figure 87 shows the similarities and differences between the elements and constructs identified.

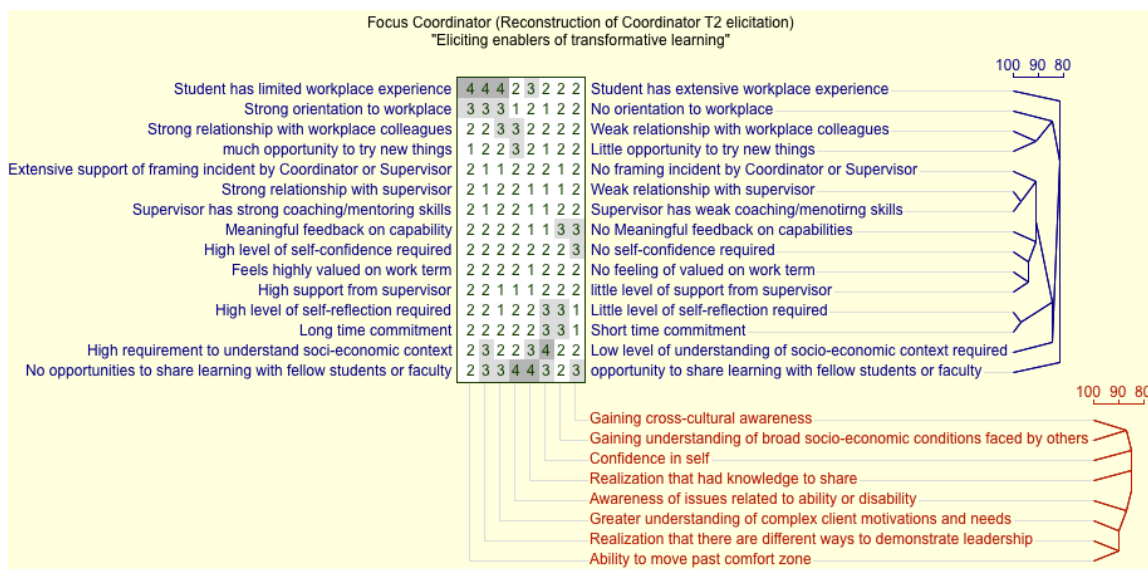


Figure 87. Focus of Elements and Constructs Coordinator

When considering the similarities and differences between the elements and constructs, the coordinator explained the alignments with the first set of elements of *ability to move past comfort zone* and *realization that there are different ways to demonstrate leadership* as follows.

They may be similar because of the nature of the programs that the students are in, that I work with. All the programs involve some element of education, some elements of leadership and they are all a human service of some sort. Our students don't normally work in areas in which they are not engaged with people.

The coordinator confirmed that they should remain as separate elements. The coordinator explained the matching of the second set of elements, *gaining cross-cultural awareness* and *gaining understanding of broad socio-economic conditions faced by others*.

Understanding your client. That involves context, it involves culture, it involves socio-economics, it involves walking a mile in somebody else's shoes.

The coordinator described how these elements could be grouped together, or be separated, depending on the student's situation:

As they become more mature, or that they get that there is a difference between those things, but when they are still young or novice, or learning, then those are fairly interwoven for them, and they haven't yet teased those things apart.

The construct similarities of *a strong relationship with the supervisor* and *supervisor has strong coaching/mentoring skills* were explained and determined to be separate. The coordinator was not sure why the constructs *long time commitment* and *high level of self-*



*reflection required* were closely aligned, but felt they should remain separate. She concurred that the constructs: *high support from supervisor* and *feels highly valued on work term* would be aligned, as they related to the development of confidence and yet were separate constructs.

Additionally, the constructs of *strong relationship with supervisor* and *extensive support of framing incident by coordinator or supervisor* as well as *much opportunity to try new things* and *strong relationship with workplace colleagues* related to a supportive environment for the student:

I think there is a whole bunch of workplace-related ones—feeling valued, high support, strong relationship with colleagues, that kind of thing. And mentorship, and relationship with supervisor that is that workplace-related environment. And support by coordinator, supervisor. Strong environment.

While both these constructs contributed to a supportive environment, they were determined to be separate and distinct.

### **Narrative Analysis: T1**

Six themes emerged from an analysis of the interview narrative. These are *time*, *learning*, *communication*, *perspective of the other*, *confidence*, and *the needs of the coordinator*. The concept of time, and how it influenced the learning process, had a past, present and future dimension.

Time. I think time in many ways, the time it takes for that student to do their degree . . . hindsight because you have thought back two or three years in your past. I think time in an experience and again away from the experience.

This quote implicates the notions of time on task, reflection and perspective, all of which are required for learning.

Other dimensions of learning, as stated by the coordinator, were captured as a second theme. These dimensions were *application of theory*, having relationships that support learning and *the importance of reflection*. The coordinator introduced time again through the concept of life-long learning, and her long-range hope for her students:

I genuinely hope that they come out of their university experience believing that learning is important for the rest of their life and that it doesn't have to happen in only one way. That learning happens, not just in a classroom, that it happens in their lives.

The third theme, *communication*, encompassed the various ways that the coordinator used communication to facilitate her students' understanding, and the benefits that resulted when students, themselves, engaged in communication. The coordinator's processes included *framing incidents*, *probing for clarification*, and *effective questioning* to assist student reflection and helping them connect their workplace learning to classroom theory.

I frame that, either in adding information or discussing how it sounds like it might have been something they have taken in their classes.

The benefits that students gained from engaging in communication were summed up as:

Self-awareness and self-satisfaction of having talked to others.

The fourth theme, *the perspective of the other*, was something the coordinator observed as her students matured:

They start to really mature. “Oh, I might not be quite like everybody else. Everybody else isn’t like me.”

This perspective included an awareness *of patient motivations or life circumstances*.

When working with people with disabilities, it was gaining the perspective that “having a disability doesn’t limit you, it is the people around you that limit you.” When students had an international experience it was coming to understand that “Canadians don’t do everything perfectly.” In summary:

They are able to see the world in a broader view. Their scope of understanding is just bigger.

Confidence, the fifth theme, was something that the coordinator considered a part of every student’s experience:

Without exception, they shift in their awareness of who they are as individuals over the course of the time they are with us. That is partly more maturity as they age, but also in the way they are as people in life, just seems to shift around feeling confident and competent.

Feeling confident translated into the students being able to share knowledge or feeling that they could make a contribution.

We have a lot of students whose confidence becomes part of what they get aware of and more capable of, demonstrating that they know something or feeling that they have something to contribute.

The final theme was identified as the *coordinator's expressed needs*. These needs were captured in the statements associated with helping students relate their studies to their own field of practice, having nice relationships with colleagues, the physical location of her office which is convenient for students, and the satisfaction of hearing from parents and alumni:

Seeing the parents and being able to share with them that it has been nice to work with their son or daughter, and being able to say something like, "They have come such a long way" and hearing the validation from the parents, "They really have grown a lot." Or alumni. When I came back from the conference, whatever alumni I have seen, often times their co-op experience has made a difference.

### **Narrative Analysis: T2**

In T2, these narrative themes were reinforced. On the theme of time, the coordinator talked more about interactions with alumni who, looking back over several years, validate the learning they gained from their experiences:

I also see that in the alumni, who will often go off and tell you, "Oh wow it really did make a difference."

The learning theme was expanded to include the idea of bringing the workplace learning back into the classroom after a work term to benefit the students' and instructors' learning:

If the faculty and staff that teach can pull forward some of that, and then students share what they know in a classroom, that makes it so much more real world for them, and for the instructors too.

The coordinator discussed the importance of mediated reflection in those cases where a student might be in a learning environment that was not positive:

Sometimes when it is really unpleasant that is when they learn a lot of interesting and useful skills. But I think there always has to be an element of, not always, but often, an element of reflection in there. If it is not a good workplace experience that they have a mentor (it doesn't have to be a coordinator or faculty member), but somebody there to support the student in their learning.

Communication continued to be a strong theme, with the coordinator commenting on the value of student's sharing their experiences and that doing so led to heightened confidence and more willingness to share.

They are confident to put it out there and share something and have people question them on it. . . . As the student gains confidence they increasingly share those experiences.

In situations where a student might not receive a lot of training, or on-the-job support, this process of being confident, asking questions and taking initiative to build understanding became even more important.

The students have to learn differently then, they have to be way more independent, they have to come with a sense of confidence and an ability to problem solve on their own. Ask questions when they are uncomfortable.

The final dimension of communication that emerged in T2 was that it was important for the student to listen as well as share.

The importance of listening and the value of that is just so phenomenal for the student.

Gaining the perspective of the other, the fourth theme, was reiterated.

Understanding your client. That involves context, it involves culture, it involves socio-economics, it involves walking a mile in somebody else's shoes.

In T2, this theme was also expanded to include the coordinator's awareness of a shift in her perspective, as it related to her students:

It is things that I learn from students all the time, it is about being humble, trying to remember where they are at, not where I want them to be . . . I intentionally try to do something that is outside of my comfort zone at least once a year, to remember every time what it is like to be that new learner and how hard that is.

The confidence theme in T2 again connected the role that confidence played in students' ability to share their ideas with others and included the role of confidence in trying new things:

Confidence in themselves, what they know, who they are, and their ability to share with others. . . . It is that confidence to go, "Oh well, I can now try things that I might not have tried before."

In T2, the final theme of coordinator's needs included additional commentary on the meaningful support she received from faculty members in her department, and how she cultivated that support:

I have way more meaningful support from lots of the faculty members. It comes with me just having to sit around and have coffee and go for runs.

### **Data Interpretation and Discussion: Coordinator T1**

The coordinator's constructs mapped onto the areas of the activity systems (Figure 88) as follows:

1. Tools (the means by which the activity takes place). From the WIE academic program and workplace: *support/framing of incident by coordinator or supervisor (C7)*, *opportunity to try new things (C3)* and *meaningful feedback on capability (C10)*. From the workplace: *strong orientation to workplace (C5)*;
2. Subject (the student): *high level of self-reflection (C1)*, *high level of self-confidence (C9)*, *feeling valued on the workplace (C11)* and *extensive workplace experience (C15)*;
3. Subject (the supervisor): *high support from supervisor (C2)*, *strong relationship with supervisor (C13)*, *supervisor has strong coaching/mentoring skills (C14)*;
4. Rules (the cultural norms, standards, guidelines). From both the WIE academic program and the workplace: *long time commitment (C6)*. From the workplace: *and requirement to understand socio-economic context (C4)*; and
5. Community (socio-cultural environment in which the activity takes place). From the Workplace: *strong relationship with workplace colleagues (C12)*. From the WIE academic program: *opportunity to share learning with students and faculty (C8)*.

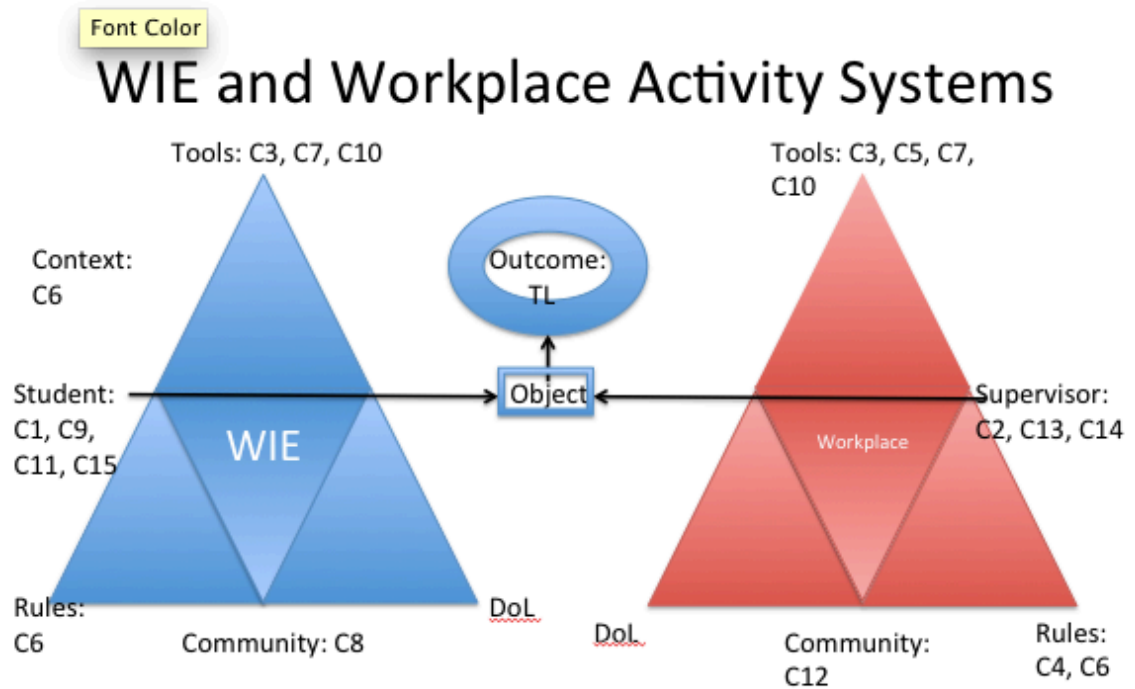


Figure 88. Activity Systems With Construct Mapping: Coordinator T1

### Dynamic Nature of Activity Systems

The dynamism within the WIE system as reflected in the coordinator's interviews is the most complex in this study. This is likely due to the coordinator's overarching perspective on both the WIE academic program and the workplace systems. This dynamism can be seen in the Subject-Object-Tools (SOT), the Subject-Rules-Community (SRC) and the Subject-Object-Community (SOC) sub-triangles as shown in Figure 89.



## Dynamism within WIE Activity System

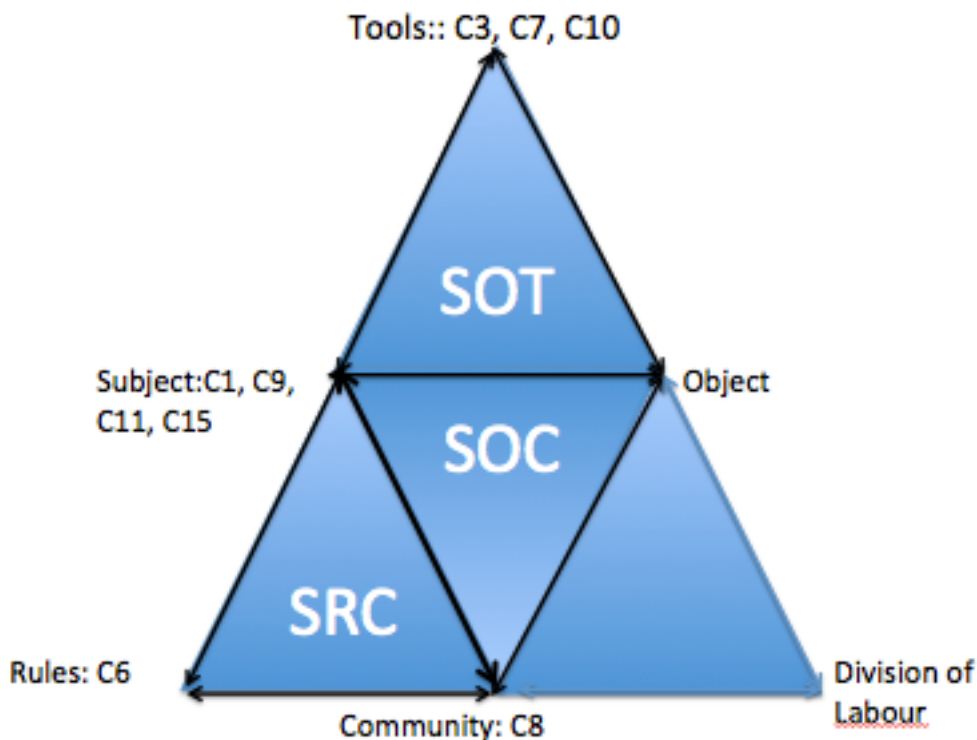


Figure 89. Dynamism Within WIE Program Activity System: Coordinator T1

The tools that the coordinator perceived that the students had from their WIE academic program included *much opportunity to try new things* (C13), *extensive support in framing incident by coordinator or supervisor* (C7), and *meaningful feedback on capability* (C10). These constructs were all tools that set the stage for, and foster, critical reflection, which can lead to transformative learning. These reflective tools are mediated by both the coordinator and the supervisor and are a demonstration of the zone of proximal development (Vygotsky, 1986). Opportunities to try new things, refers to the encouragement given to students in the program to experience different types of workplaces and roles. The exposure to a variety of workplaces and roles enables students to learn new material, become aware of different ways of working and challenge their

assumptions about the world of work and their place within it, leading to expansive learning (Engeström, 2009) and transformative learning.

The other area of this sub-triangle is comprised of the constructs from the students' component of this activity system: *high level of self-reflection required* (C1), *high level of confidence required* (C9), *feels highly valued on work term* (C11), *student has extensive workplace experience* (C15).

These constructs are a mix of internal and external attributes such as confidence, having workplace experience, being self-reflective, and feeling valued. These attributes enabled the students' ability to be critically self-reflective and to learn from their experiences, handle challenges and grow. Within this construct group is an emotion-based construct: *feeling valued on the work term*. This positive emotional state provides a safe learning environment for students enabling them to engage their capabilities (Roth, 2007). The importance of this emotional dimension for students is highlighted in the second area of the WIE activity system that is most evidently active: the Subject-Object-Community (SOC) sub-triangle.

Being afforded opportunities to share learning with fellow students and faculty provides that student with a sense that their learning is of value to their WIE community. This recognition that the learning has not only use value for the student but also exchange value for their community introduces this tension that is at the heart of activity theory (Roth, 2010).

The third sub-triangle (SRC) brings in the rules component of *long time commitment*. In considering time, the coordinator was referring to the length of time the student had in their program, during their work placements, and also the time to reflect

back on their experiences and gain perspective. The coordinator provided a multi-dimensional view of time and brings in the concepts of past, present and future.

Considering transformative learning as something that is enabled by time and as such is a dynamic event that changes over time speaks to the point made by Roth (2010) that time be factored in when examining activity systems so that we are not only looking at the system as a snapshot in time, but rather as an evolving, dynamic entity (Roth, 2010). The dynamic nature of the workplace system is shown in Figure 90:

## Dynamism within Workplace Activity

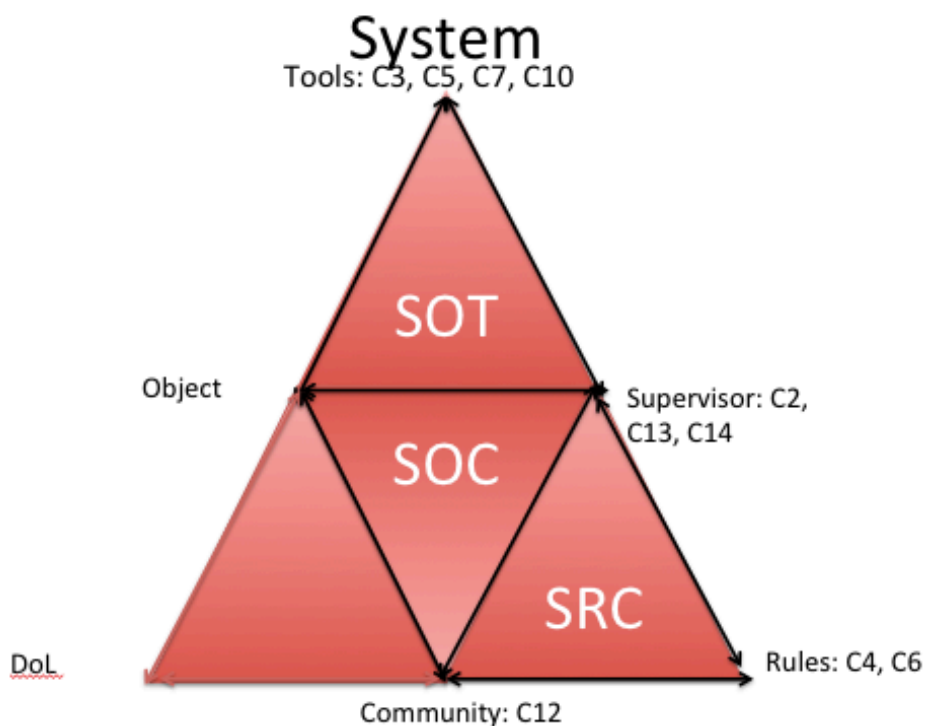


Figure 90. Dynamism Within Workplace System: Coordinator T1

Figure 90 shows that there were three sub-triangle areas of the workplace system that were the most dynamic. These were: the Subject (supervisor)-Object-Tools (SOT), Subject (supervisor)-Object-Community (SOC) and Subject-Rules-Community (SRC) sub-triangles. The tools of *opportunity to try new things, strong orientation to workplace,*

*extensive support framing incident by coordinator or supervisor* and *meaningful feedback* enabled transformative learning through the dynamic relationship these tools had with the work term object.

Students who took advantage of the opportunity to try new things, who were provided with an orientation to the workplace, and who received meaningful feedback and support in framing incidences, appear to be enabled to reflect, resolve challenges, engage in critical self-reflection and have transformative learning experiences. The supportive supervisor (C2) with whom the student can form a relationship (C13) and receive coaching and mentoring (C14) plays a strong role in this enabling process through the provision of the dialectical resources mediating the environment. The support provides the positive emotional context, the relationship allows for trust, or personal vulnerability (Hanson, 2013) so that the coaching and mentoring can be reflected upon and transformative learning can occur.

In the SOC sub-triangle the importance of the community became evident in the enabler: *strong relationship with colleagues* (C12). Having strong working relationships with colleagues allowed students to become part of a team, and as seen in all of the cases, the support, validation and resources provided to students from their teammates are considered to be strong enablers of transformative learning. The team acts as a resource in helping students navigate the work and workplace, providing relational epistemology (Taylor, 2005), and offering encouragement.

The requirement to understand the socio-economic context (C4) and the time commitment (C6) were active in the rules component of the workplace activity system. The SRC dynamism came about through the interaction of time the student has to learn

about and appreciate the context and build relationships with their supervisor and colleagues. The more time they have to spend, seems to promote deeper understanding and relationships as they communicate with, work alongside and appreciate the space in which their workplace operates.

### **Strength of Constructs**

The “very useful—consistently” constructs had mean scores from 1-1.7 and standard deviations less than and equal to 1.0. These strongest constructs reflect the coordinator’s comments about the importance of reflective practices, they map on to the systems as:

- Tools: WIE academic program and workplace: *extensive support of framing incident by coordinator and supervisor (C7)*; and
- Subject: supervisor: *high support from supervisor (C2)*, *strong relationship with supervisor (C13)* and *supervisor has strong coaching/mentoring skills (C14)*.

“Consistently useful” constructs had mean scores from 1.8 – 2.5 and standard deviations less than and equal to 1.0 and map out as:

- Tools: WIE academic program and workplace: *much opportunity to try new things (C3)* and *meaningful feedback on capability (C10)*;
- Subject: student: *high level of self-reflection required (C1)*, *high level of self-confidence required (C9)* and *feels highly valued on work term (C11)*;
- Rules: WIE academic program, workplace and context: *long time commitment (C6)*; and
- Community: workplace: *strong relationship with workplace colleagues (C12)*.

The less useful and consistent constructs had mean scores greater than 2.5 and standard deviations less than and equal to 1.0; these map out as:

- Subject: student: *student has extensive workplace experience* (C15);
- Community: WIE academic program: *opportunity to share learning with fellow students or faculty* (C8); and
- Rules: workplace: *high requirement to understand socio-economic context* (C4).

### **Connectivity Between Systems**

Figure 91 demonstrates connectivity around two main domains between the WIE academic program and the workplace activity systems. The coordinator at T1 identified the rule constructs as *much opportunity to try new things, extensive support of framing incident by coordinator or supervisor* and *meaningful feedback on capability* which connect both the WIE academic program and the workplace as boundary-spanners (Engeström, 2009).

The WIE academic program requires an assessment of the student's learning goals and competencies that are conducted by the coordinator and the workplace supervisor. This provides an opportunity for the student to receive meaningful feedback and to have whatever incidences they have experienced to be framed in the context of this learning. Both the WIE academic program and the workplace encourage and provide for many opportunities to be exposed to variety of workplaces and work duties.

The second area of connectivity is the construct *length of time commitment*. The coordinator spoke about time in a number of ways including length of time of the student's program, which allows for them to try a variety of work terms that alternate with academic semesters. This time provides for both time on the job and time away from

the job to reflect, and demonstrates the importance of historicity (Engeström, 1987; Roth, 2010). The time dimension also applied to the general context in that after the work experiences are over there is still ongoing reflection that can lead to transformative learning as students reflect on their work terms and how that influences their current and future choices. This time period can be years in length and represents another dimension within which these activity systems are nested.

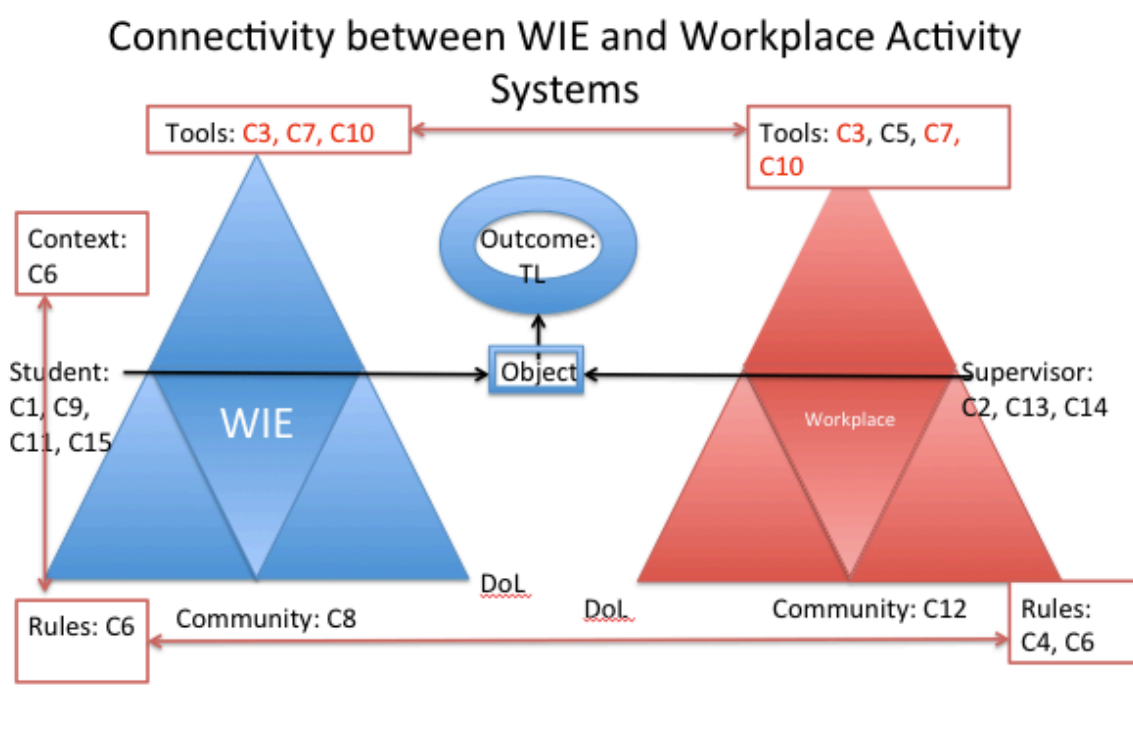


Figure 91. Coordinator T1 Connectivity

### Data Interpretation and Discussion: Coordinator T2

As there were no additional constructs, the activity systems remain the same as in T1. There was also no change in the dynamism other than a slight intensifying of the workplace dynamism due to the strengthening of the C4 construct: *high requirement to understand socio-economic context*.

### **Strength of Constructs**

The strengthening of construct C4 resulted in its movement into the “useful” category and away from the “less useful” category. The “very useful” category remained unchanged.

In summary, the dynamic nature of the construct strength from T1 to T2 was evident, however, in the case of the coordinator this change was not as pronounced as in the outcomes of some of the other interviews.

### **Strength of Constructs: Based on Experience Perspective**

The transformative learning experiences remain the same in T1 and T2 and were categorized as perspectives (Table 24), according to Fenwick (2000).



Table 24. *Coordinator Elements T1 and T2*

<p style="text-align: center;"><b>Constructivist</b></p> <ul style="list-style-type: none"> <li>• Gaining cross-cultural awareness</li> </ul>	<p style="text-align: center;"><b>Critical-cultural</b></p> <ul style="list-style-type: none"> <li>• Gaining understanding of socio-economic conditions faced by others</li> <li>• Awareness of issues related to disability</li> <li>• Greater understanding of complex patient/client motivations and needs</li> </ul>
<p style="text-align: center;"><b>Psychoanalytic</b></p> <ul style="list-style-type: none"> <li>• Confidence in self</li> <li>• Ability to move past comfort zone</li> </ul>	<p style="text-align: center;"><b><u>Situative</u></b></p> <ul style="list-style-type: none"> <li>• Realization that there are different ways to demonstrate leadership</li> </ul> <p style="text-align: center;"><b><u>Enactivist</u></b></p> <ul style="list-style-type: none"> <li>• Realization that had knowledge to share</li> </ul>

The constructs were mapped onto the activity systems through an experiential learning perspective lens. For the constructivist experience, the coordinator perceived that the students had experienced *gaining cross-cultural awareness*. All of the constructs except *opportunity to share learning with fellow students or faculty (C8)*, *high level of self-confidence required (C9)*, *meaningful feedback on capability (C10)* and *student has*

*extensive workplace experience* (C15) were seen as very useful and useful enablers of this transformational learning experience. Interestingly, the coordinator did not perceive self-confidence as being a strong enabler of *gaining cross-cultural awareness*, yet literature on the motivational dimension of cross-cultural intelligence (Earley & Ang, 2003) identifies internal motivation and self-efficacy (Bandura, 1986) as being strong determinants of gaining cross-cultural intelligence.

The coordinator perceived the students to have had the following critical-cultural experiences: *gaining understanding of broad socio-economic conditions faced by others*, *greater understanding of complex patient/client motivations and needs* and *awareness of issues related to disability*. All of the constructs except: *opportunity to share learning with fellow students or faculty* (C8), *strong relationship with workplace colleagues* (C12) and *student has extensive workplace experience* (C15) were identified as very useful and useful enablers of these transformational learning experiences. In the opinion of the coordinator, the systemic critical self-reflection as described by Mezirow (1998), and required for these kind of transformative experiences, would be most strongly enabled by support from the supervisor and coordinator and less so by workplace colleagues, fellow students and faculty.

The coordinator perceived the students to have had two types of psychoanalytical experiences: *confidence in self* and *ability to move past comfort zone*. All of the constructs except *high requirement to understand socio-economic context* (C4), *opportunity to share learning with fellow students or faculty* (C8), and *student has extensive workplace experience* (C15) are identified as very useful and useful enablers of these transformational learning experiences. The lesser need assigned by the coordinator

for the *workplace experience, an understanding of the socio-economic context* and *sharing learning* speaks to the more introspective aspects of these kinds of learning experiences.

With the situative and enactivist experiences of *realization that there are different ways to demonstrate leadership* and *realization that had knowledge to share*, all of the constructs except *high requirement to understand socio-economic context* (C4) were seen as very useful and useful enablers of these transformational learning experiences. In this instance, broad socio-economic issues in society were not seen to be as important as the students' capabilities, supportive environment, institutional requirements and time and value given to reflection (Hanson, 2013) in enabling the organizational critical self-reflection, leading to these transformative experiences.

### **Connectivity Between WIE and Workplace Activity Systems**

The connectivity between the WIE and the workplace activity systems remained unchanged from T1.

### **Summary of Comparison of Coordinator between T1 and T2**

In T2, the coordinator changed one rating for the construct *high requirement to understand socio-economic context*. It was rated as stronger and moved from being “less useful” to being “useful.” The dynamism of the workplace system became slightly more intensified. This did not significantly affect the psychoanalytical perspective where this construct rating's change occurred.

## **Integration**

The final component of the T2 interview was to explore the idea of integration of the transformative learning into the workplace and back into the WIE academic program. The coordinator was able to identify several ways in which the enabling of the students' transformative learning also enabled the integration of that learning into the workplace and back into the students' WIE academic programs.

The student's experience is often really enhanced when the employer helps them integrate all the way along in a co-op experience. So first off, they get an incredibly great orientation and then they get support throughout the time they are with the employer. What difference that makes is that it becomes a part of who they are in the workplace, what they have learned, and in their continuing studies, whatever that transformative understanding has been.

The coordinator spoke about the importance of the time spent initially orienting the students on the job and the difference that made to integration and the subsequent role of the WIE academic program:

Fully functioning, very contributing and outstanding programs as a result of that. I was so impressed. That student felt incredibly validated. It was fantastic. She is doing great work as a result of that as well. And yet I see in other organizations that feel that they can't do that financial support, for whatever reasons, and the students have to learn differently then, they have to be way more independent, they have to come with a sense of confidence and an ability to problem solve on their own. Ask questions when they are uncomfortable. So the integration becomes far more self-oriented. . . . That is where then institutions, the co-op side

of things, does help with that, helping them integrate their learning, their assignments the workplace visits, and those things, really makes a much greater difference. Supports that process.

The role that the enabler of the student being able to share their learning with fellow students and faculty was identified as an important vehicle for integration back into the WIE academic program:

If the faculty and staff that teach can pull forward some of that, and then the way students share what they know in a classroom, that it makes it so much more real world for them, and for the instructors too. As a student they are able to see what they know actually does have a theoretical basis. Or their theory does inform practice.

The coordinator also spoke about how she had been transformed by the interactions with her students and their learning:

It is things that I learn from students all the time, it is about being humble, trying to remember where they are at, not where I want them to be, or what they need to be. I try really hard to do that. I don't always succeed by a long shot. But I argue for that. I find myself arguing for that sometimes with the faculty members, when they get annoyed with where the students are at, or they are doing things their way, and I'm like: "Remember that is where they are at, they are not where we were at, at that same stage, and that is okay." I find that I argue that quite often. And I have to remind myself of that too. I want to say, "For heaven's sake get with the program," but they are not always where I need them to be or where I

think they should be. If they get themselves in trouble as a result of that, how can we enrich that, or help them support that. That is really an important piece for me. I feel like that quite often. That new learning for me is really important, reminding myself what it is like to be uncomfortable in my learning. I think that happens a lot for students, and trying hard to respect where they are at.

This integration is shown in Figure 92.

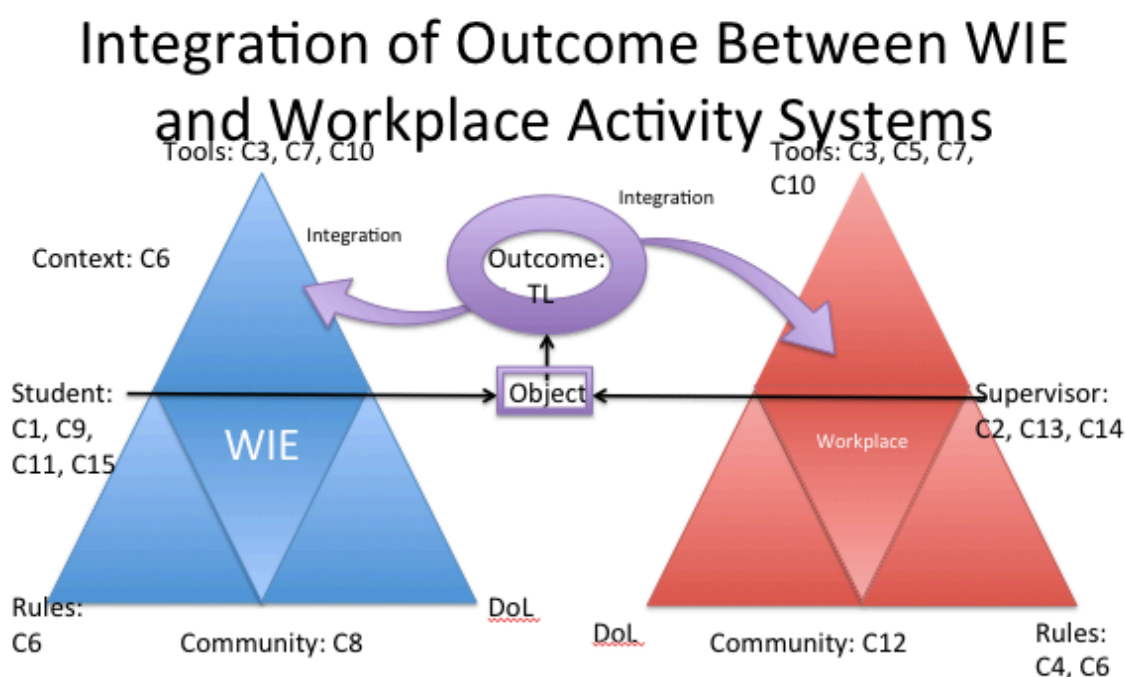


Figure 92. Coordinator Integration

The constructs of *a strong orientation to the workplace* and *opportunities to share learning with fellow students and faculty* were identified as enabling integration into workplaces and the WIE academic program. In addition, the coordinator's transformation as a result of working with her students and employers in enabling the transformative

process in her students was a good example of co-configuration (Avis, 2009; Engeström, 2009).

In summary, the coordinator identified eight types of transformative learning experiences that she had observed in students, including the students that were part of this study. These experiences included constructivist, critical-cultural, psychoanalytical, situative and enactivist perspectives. She identified fifteen enablers of these experiences that were mapped onto the WIE and workplace activity systems' tools, community, rules, and subjects, as well as identifying the external context of time. This time dimension, as well as the themes of *learning, communication, perspective of the other, confidence* and *coordinator needs*, were revealed through the narrative analysis. Connectivity was found between the tools and rules of the two systems with the latter including the time dimension. This connectivity was a demonstration of boundary spanning (Engeström, 2009). Integration was shown to occur as a result of the supervisor support, orientation, time and opportunity to share learning with others. Furthermore, the coordinator discussed her transformation as a result of working with students, an example of co-configuration. (Avis, 2009; Engeström, 2009).

## Chapter 4. Comparison of Case Findings

In the previous chapter each case was described, analyzed, interpreted and discussed independently from the other. This was followed by a section providing the coordinator's perspective. This chapter provides a comprehensive discussion of the combined findings and presents comparisons and contrasts between and among the students, supervisors and their coordinator.

### Comparison of Student Transformative Learning Experiences

At T1, Case A, B, C, and D students identified 31 unique transformative learning instances that they had experienced in their WIE academic program. At T2, the students confirmed those experiences, and added another 11 bringing the total to 42 transformative learning experiences. This represents a growth of 35% in the elements. Only Case B student did not add a new element to those described in T1. The change in the number of elements for each case is shown in Table 25.

Table 25. *Summary of Student Elements T1 and T2*

Elements	T1	T2	% Change
Case A	10	15	+50%
Case B	7	7	0%
Case C	7	12	+71%
Case D	7	8	+14%

Table 26. *Summary of Student Perspectives T1 and T2*



Perspective	T1	T2	% Change
Constructivist	6	7	+17%
Critical-Cultural	5	8	+60%
Psychoanalytical	10	13	+30%
Situative	7	8	+14%
Enactivist	3	6	+100%

Table 26 shows how these elements changed from T1 to T2 based on the perspective.

The largest number of student experiences, both in T1 and in T2, was identified as psychoanalytical and the largest percent change was in the enactivist perspective category, followed by the positive increase in critical cultural perspective.

There were some commonalities with these elements identified as being transformative learning moments from all of the students. From the constructivist perspective, the students spoke about several types of skill development, notably mentorship, mediation, listening, organizational, professional, and adaptation skills.

Within the critical-cultural perspective, the identified elements can be categorized within three general thematic categories: *awareness of the needs of others*, *office politics* and *the broader socio-political environment*. Office politics included dimensions such as working with teams, interpersonal conflict, and workplace functioning. The broader socio-political environment included the wellness of individuals and community and the factors that impact wellness.

The psychoanalytical perspective experiences can be categorized as three general types: growth in self-awareness, growth in belief in self and self-confidence, emotional

development, and growth in intrinsic motivation. Students described their growth in self-awareness in terms of having a better understanding of their strengths and limitations, and having better abilities to set boundaries. Their growth in their belief in themselves and the consequent growth in self-confidence was expressed in such ways as feeling confident in their ability to overcome challenges. The emotional development component included the development of increased levels of empathy, compassion, inclusivity and managing negative emotions such as stress and anxiety. The growth in intrinsic motivation was expressed in terms understanding what was personally motivating and working towards those goals.

The situative perspective elements reflect four thematic categories of: *relationship with supervisor, relationship with co-workers, networking and career decision-making*. Students experienced transformed understanding regarding the roles played by their supervisors and co-workers and gained a deeper appreciation for the importance of these roles and how they influence the organizations in which they worked. Similarly, the role that networking played in building community within and between organizations and how a student could network as a way to become more firmly embedded in the organization became evident to the students. Finally, being located in a community of practice and learning more about the field of practice provided transformational learning for students regarding their career decisions. Having this exposure helped them confirm career choices and career parameters.

The enactivist perspective elements were classified in two thematic categories: *the power of empowering self and others* and *the impact of personal agency on self and others*. The students described their transformative learning in this domain as affecting

themselves as well as their environment, that included clients, co-workers, or the organizational objectives. The concept of empowerment and agency are particular in that the former refers to the feeling of power that arose from and resulted in empowering others whereas the latter refers to actions taken in the workplace that had an impact on the agency of the student and on others. These elements are categorized in Table 27.

Table 27. *Categorization of Combined Student Elements*

<p style="text-align: center;"><b>Constructivist</b></p> <ul style="list-style-type: none"> <li>• Skill development</li> </ul>	<p style="text-align: center;"><b>Critical-cultural</b></p> <ul style="list-style-type: none"> <li>• Awareness of the needs of others</li> <li>• Office politics</li> <li>• Broader socio-political environment</li> </ul>
<p style="text-align: center;"><b>Psychoanalytic</b></p> <ul style="list-style-type: none"> <li>• Growth in self-awareness</li> <li>• Growth in belief in self and self-confidence</li> <li>• Emotional development</li> <li>• Growth in intrinsic motivation</li> </ul>	<p style="text-align: center;"><b><u>Situative</u></b></p> <ul style="list-style-type: none"> <li>• Relationship with supervisor</li> <li>• Relationship with co-workers</li> <li>• Networking</li> <li>• Career decision making</li> </ul> <p style="text-align: center;"><b><u>Enactivist</u></b></p> <ul style="list-style-type: none"> <li>• Power of empowering self and others</li> <li>• Impact of personal agency on self and others</li> </ul>

### **Comparison of Student Transformative Learning Constructs**

In summary, the students identified 57 unique enablers of transformative learning in T1 and 66 in T2. This represents an increase of 16% in the number of identified

constructs. The students confirmed that the constructs described in T1 were still valid and relevant in T2. The increase in construct identification came, in large, from one case (Case C) who also produced the greatest increase in element identification at T2. This phenomenon of most likely resulted from an increase in understanding of the nature of transformative learning as a result of the discussions with the researcher at T1 that enabled her to identify explicitly the elements and constructs. Table 28 summarizes these data. Table 29 identifies the constructs as mapped against the WIE academic program activity system and Table 30 identifies the constructs as mapped against the workplace activity system.

Table 28. *Summary of Student Constructs T1 and T2*

<b>Constructs</b>	<b>T1</b>	<b>T2</b>	<b>% Change</b>
Case A	15	16	+6.7%
Case B	16	16	0%
Case C	11	18	+64%
Case D	15	16	+6.7%

Table 29. *Summary of WIE Academic Program Activity System Constructs T1 And T2*

<b>Constructs</b>	<b>T1</b>	<b>Average T1 Mean</b>	<b>T2</b>	<b>Average T2Mean</b>	<b>%Change in #</b>	<b>%Change in Mean</b>
<b>Tools</b>	13	2.4	13	2.8	0%	+16% (weakens)
<b>Subject (Student)</b>	11	2.7	14	2.2	+27%	-19% (strengthens)

<b>Rules</b>	0	0	0	0	n/a	n/a
<b>Community</b>	2	2.8	2	3	0%	+7% (weakens)
<b>Division of Labour</b>	0	0	0	0	n/a	n/a

Table 30. *Summary of Workplace Activity System Constructs T1 And T2*

<b>Constructs</b>	<b>T1</b>	<b>Average T1 Mean</b>	<b>T2</b>	<b>Average T2Mean</b>	<b>%Change in #</b>	<b>%Change in Mean</b>
<b>Tools</b>	18	2.4	19	2.7	+5.6%	+12.5% (weakens)
<b>Subject (Supervisor)</b>	9	2.1	11	2	+22%	-5% (strengthens)
<b>Rules</b>	3	1.8	3	1.7	0%	-6% (strengthens)
<b>Community</b>	12	2.2	14	2.5	+17%	+12% (weakens)
<b>Division of Labour</b>	3	2.6	5	2.3	+67%	-12% (strengthens)

In summary, the largest number of constructs (19) mapped onto the tools section of the workplace activity system, 14 constructs mapped onto workplace community and 14 onto the student as subject component of the WIE academic program activity system.

The greatest change in the number of constructs between T1 and T2 was in workplace division of labour (+67%), followed by the student (+27%) and the supervisor (+22%).

The greatest strengthening of constructs was with the students as subject (-19%), workplace division of labour (-12%), workplace rules (-6%) and supervisor (-5%). This demonstrated that the point made by Roth (2010) that activity systems are dynamic over time and adapt and change according to circumstances (Roth, 2010).

Six common thematic categories emerge from an analysis of all of the students' constructs. The first thematic category *opportunities to learn and apply learning* includes opportunity to do a wide range of work, to apply existing knowledge and to be exposed to new knowledge. The second thematic category of *supportive environment*, this thematic category includes feeling supported, trusted, respected and valued in the workplace as well as having supports externally from family and friends. The third thematic category is *assessment, feedback and reflection* and includes setting learning goals, assessment using the competency framework and personal reflection on the attainment of these goals and competencies. The fourth thematic category is the *students' own capabilities* and is comprised of knowledge, skills and attributes that they brought, and continued to hone, in the workplace. The fifth thematic category, *co-workers*, included the support, guidance and learning gained from co-workers and teammates. The sixth, and final thematic category is the *supervisor* and includes the role modelling, mentorship and coaching provided by supervisors.

The thematic categories deemed to be the strongest enablers of transformative learning were: *a supportive environment, opportunities to learn and apply learning, students' own capabilities* and the *team*. The descriptions for *supportive environment*

within the “very useful” category included terms such as respect, responsibility, autonomy and freedom. Within this “very useful” category, the terms to describe opportunities to learn and apply learning were, *adding value, hands-on learning, interactions with clients and customers and critical thinking*. The capabilities that were identified in this strongest category included *self-awareness and self-confidence, personal values, being personally empowered and big-picture thinking*. The strongest team enablers were described as *co-workers who were role models, professionals, and willing to support and educate students*.

Useful enablers included the *supervisor, assessment and reflection* as well as those identified by some as “very useful.” The supervisor enablers of being a *role model, being respected and providing appropriate levels of challenge and guidance* fall in this “useful” category. The useful enablers that related to assessment and reflection were: *having targets and goals and being able to share those with others, meaningful and supportive feedback from supervisors and co-workers*. Useful opportunities to learn and apply learning were identified as *learning new theories, applying relevant knowledge, being asked to do things past personal comfort zones, and being exposed to the broader organizational context*. Components of a supportive environment described as “useful” were *being given the power and authority to do the job, being respected and seen as capable, mentorship, and feeling supported generally both within and outside the organization*. The useful “team” enablers were *working as part of a team and having co-workers who were experienced and trusted the student*. Finally, the students’ capability of *working independently* was seen as useful.

Less useful constructs were those in the assessment and reflection category and included *writing a work term report, setting learning goals and competencies, the mid-term site visit, a reflective journal, receiving feedback from clients and reflecting with team members*. The students' capabilities that were seen as less useful were having *research skills, listening and trust building skills*. Less useful opportunities to learn and to apply learning were *networking and access to information at the workplace and having relevant courses and technical knowledge*. The less useful enablers from the supportive environment category were a *caring professor and family and friends*. Finally, the less useful "team" enablers were *being able to delegate and the influence of team members*. These common constructs were mapped on to the WIE academic program and workplace activity systems in Figure 93.

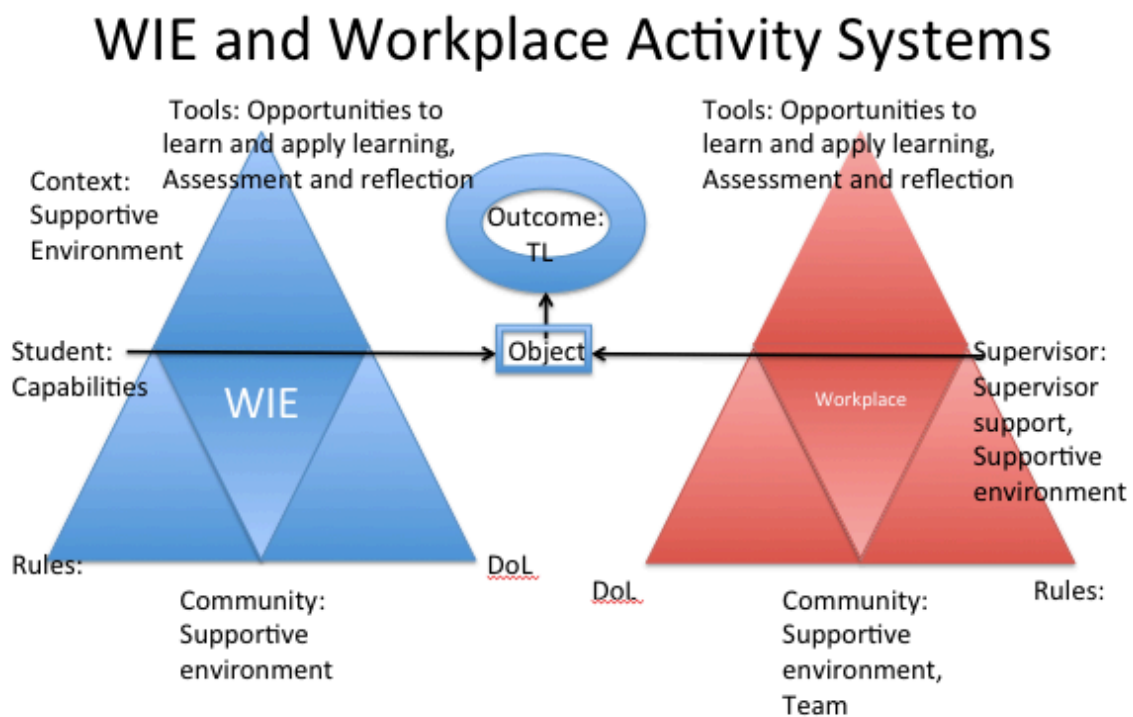


Figure 93. Combined Student Constructs Onto WIE and Workplace Activity Systems



Figure 94 shows the connectivity between the WIE academic program and workplace systems from the student perspective. In this figure the tools from the WIE academic program and the workplace of *opportunities to learn and apply learning* as well as *assessment and reflection* connected the two systems as boundary-spanning devices (Engeström, 2009). The construct thematic category of *supportive environment* connected the two systems in a number of areas: between the two communities, with the supervisor and the context at large that included the support of family and friends. This might represent a broadened zone of proximal development (Vygotsky, 1986) that encompassed all individuals who supported the students' transformative learning.

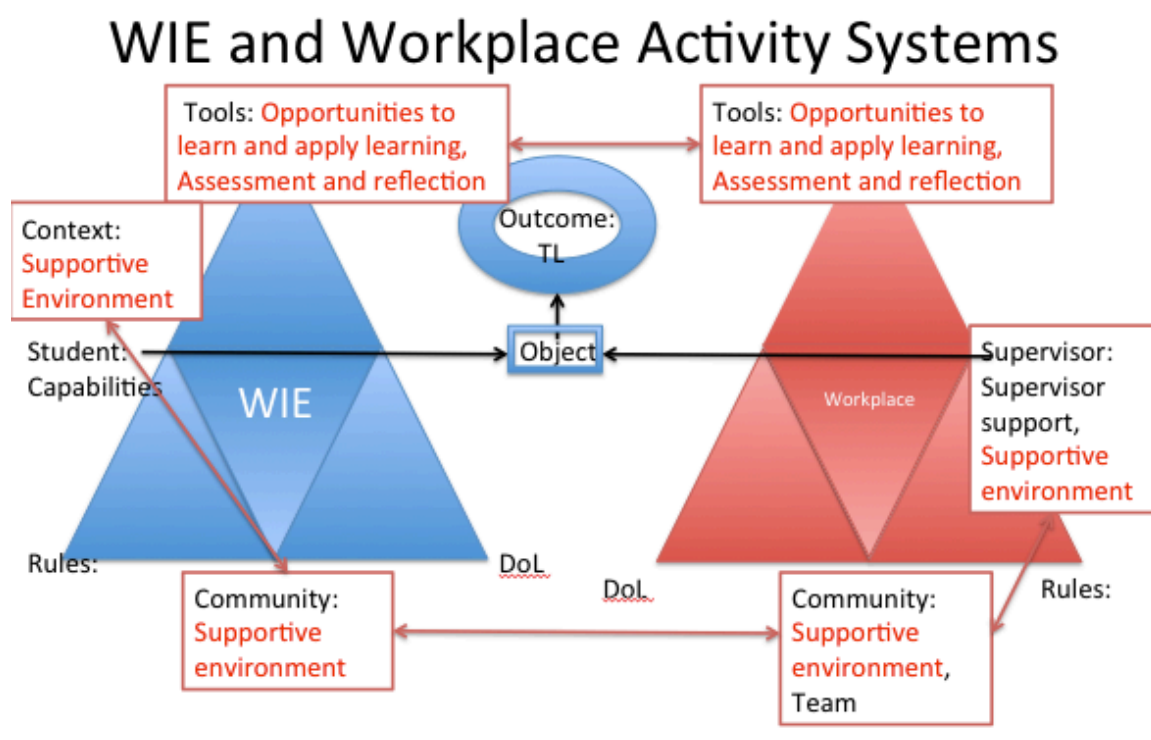


Figure 94. Combined Student Connectivity Between Activity Systems

The final area of comparison is how the students viewed the integration of the transformative learning back into the workplace and WIE academic program, seen in

Figure 95. All of the students concurred that from their transformative learning experiences, they had gained knowledge, skills, and attitudes that were of benefit to their current workplaces and would be of benefit in their future workplaces and courses. They also indicated that the enablers of the transformative learning experiences that they had identified in their work term placements would be effective enablers in other contexts, such as in their academic program.

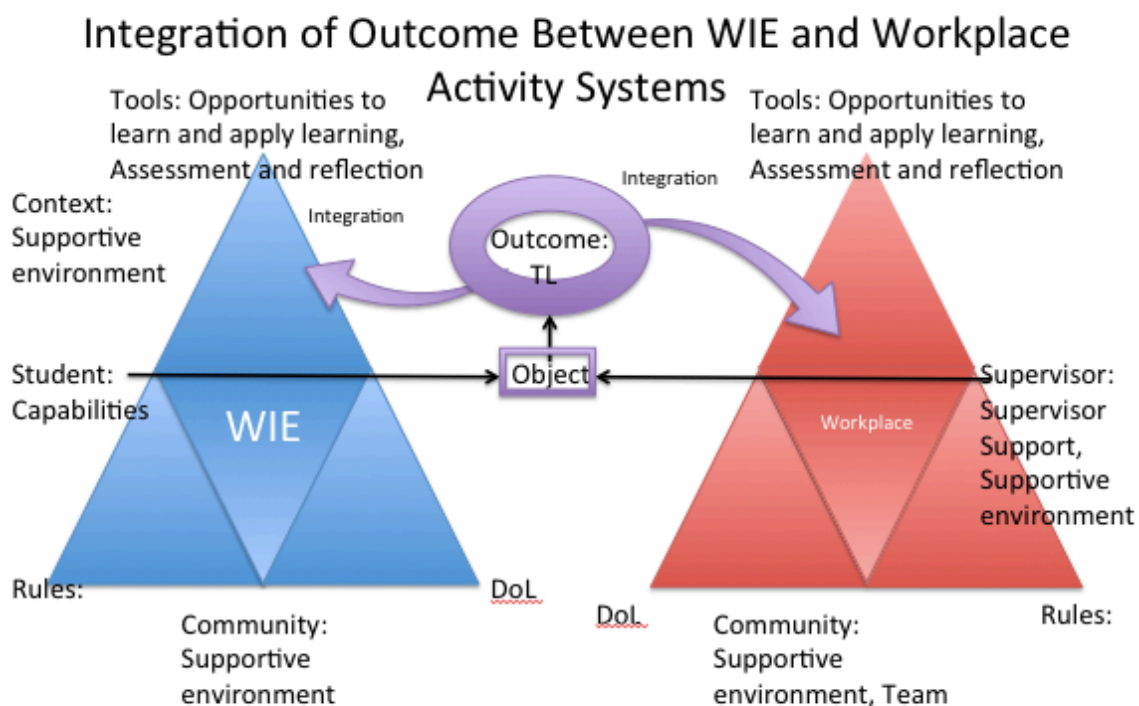


Figure 95. Combined Student Integration

The students expressed over 40 examples of transformative learning that they had experienced throughout their WIE program, and over 10 of these experiences occurred within the work term in which they were situated during the research. Of these 40 examples, 23 were classified in the psychoanalytical category, with the most amount of change in classification from T1 to T2 occurring in the enactivist and critical-cultural

categories. This suggests that the way in which students experienced learning on their WIE work term was perceived as somewhat different from the experiences that they identified at T1. The identified experiences at T2 appeared to provide them not only with skill development but also the development of self-formation (Dirkx, 2012) and agency (Taylor, 1998) within their growing understanding of their socio-cultural context. The students also identified over 65 constructs 29 of which that mapped onto the WIE academic program and 47 that mapped onto the workplace activity systems. These constructs were combined into six main thematic categories: *opportunities to learn and apply learning, supportive environment, students' own capabilities, team, supervisor, assessment and reflection*. Interestingly, while *assessment and reflection* and *supervisor* did emerge as thematic categories, they were not as strongly rated as the other construct thematic categories. Finally, all of the students felt that the transformative learning they had experienced would be of benefit to their workplaces, current and future, and to their ongoing studies.

In summary, while each student had their own experiences and travelled along their journey through their work terms, many commonalities were found. In each case, the students had transformative learning experiences from all five perspectives (Fenwick, 2000), with a shift in T2 towards the critical cultural, psychoanalytical, and enactivist. These experiences were enabled by *opportunities to learn and apply learning, assessment and reflection, a supportive supervisor and team, the student's own capabilities and a supportive environment that created a positive emotional state*. This supportive environment included their interconnected, boundary-spanned (Engeström, 2009) WIE

academic program and workplace activity systems, as well as family and friends suggesting an expansion in their zone of proximal development (Vygotsky, 1986).

### **Comparison of Supervisor Transformative Learning Experiences**

In summary, in T1 the supervisors identified 28 transformative learning experiences that they had observed in students from WIE programs to date. In T2 the supervisors confirmed those experiences, and added another two experiences and, in one case, consolidated two elements into one bringing the total to 29 transformative learning experiences. This represented a growth of 4% in the elements. In some cases the supervisors did not add a new element as the additional learning they observed being gained over the summer term were included in one of the categories they had described in T1. The change in the number of elements for each case is shown in Table 31.

Table 31. *Summary of Supervisor Elements T1 and T2*

<b>Elements</b>	<b>T1</b>	<b>T2</b>	<b>% Change</b>
Case A	7	8	+14%
Case B	8	7	-12.5%
Case C	6	6	0%
Case D	7	8	+14%

In Table 32, some elements changed from T1 to T2 based on the classification perspective. The greatest number of experiences observed, both in T1 and in T2, were categorized as situative and that the only change was for the psychoanalytical perspective.

Table 32. *Summary of Supervisor Perspective T1 and T2*

Perspective	T1	T2	% Change
Constructivist	5	5	0%
Critical-Cultural	6	6	0%
Psychoanalytical	5	6	+20%
Situative	8	8	0%
Enactivist	4	4	0%

From the constructivist perspective, the supervisors spoke about skill development, notably problem-solving and adapting to change, as well as learning about policies and procedures required for the workplace.

In the critical-cultural perspective three thematic categories emerged: *awareness of the broader socio-political environment, office politics and the challenges and opportunities of working with people with disabilities*. Office politics included dimensions such as *working with team members* and *interpersonal conflict*. The broader socio-political environment included such factors as the effect of *psychosocial issues on outcomes, understanding the needs of their community, and a for-profit versus not-for-profit perspective*. In three out of the four cases, the students were working with clients who had a diminished range of ability levels. This provided students with the chance to experience the challenges and opportunities of working with people with disabilities. These challenges and opportunities included observing different approaches to recovery and participation, the influence of family and adaptations to programming.

The psychoanalytical perspective contained three thematic categories: *growth in self-awareness, growth in belief in self and self-confidence* and *developing agency*. Supervisors described the growth in self-awareness in terms of what they knew and

needed to know. The observed growth in the students' belief in themselves and their consequent growth in self-confidence was expressed in ways such as having *the courage of convictions* and *feeling confident in their ability to overcome challenges*. Developing agency was described as *applying their knowledge appropriately* and *working through adversity and perseverance*.

The situative perspective included the four thematic categories of: *valuing and identifying as part of the team*, *gaining respect of team*, *gaining employer's perspective* and *approach and career decision-making*. Supervisors identified that the students appeared to shift in the way they valued different team members and began to see themselves as part of the team. *Gaining the respect of the team* was another area of transformative learning, and this was accomplished as a result of their valuable contributions or their demonstration effective leadership abilities. Supervisors observed that the students began to understand the employer's perspective and approach and they began to show that they were thinking with the employer's "hat" on, in applying policies and procedures and considering the needs of the organization.

Finally, supervisors observed that being located in a community of practice and learning more about the field provided transformational learning for students regarding their career decisions. Having this exposure helped students to confirm career choices and career parameters.

The enactivist perspective included one overarching thematic category: the impact of personal agency on self and others. The supervisors spoke about change that they had observed in students whose work impacted others. The impact on others included the

impact on individual clients, their family members, the team and the development of programs. These elements are categorized in Table 33.

Table 33. *Summary of Combined Supervisor Elements*

<p style="text-align: center;"><b>Constructivist</b></p> <ul style="list-style-type: none"> <li>• Skill development</li> <li>• Learning policies and procedures</li> </ul>	<p style="text-align: center;"><b>Critical-cultural</b></p> <ul style="list-style-type: none"> <li>• Understanding broader socio-political environment</li> <li>• Office politics</li> <li>• Understanding challenges and opportunities of working with people with disabilities</li> </ul>
<p style="text-align: center;"><b>Psychoanalytic</b></p> <ul style="list-style-type: none"> <li>• Growth in self-awareness</li> <li>• Growth in belief in self and self-confidence</li> <li>• Developing agency</li> </ul>	<p style="text-align: center;"><b><u>Situative</u></b></p> <ul style="list-style-type: none"> <li>• Valuing and identifying as part of team</li> <li>• Gaining respect of team</li> <li>• Gaining employer's perspective and approach</li> <li>• Career decision making</li> </ul> <p style="text-align: center;"><b><u>Enactivist</u></b></p> <ul style="list-style-type: none"> <li>• Impact of personal agency on self and others</li> </ul>

### Comparison of Supervisor Transformative Learning Constructs

In summary, the supervisors identified 49 enablers of transformative learning at T1 and 53 in T2, resulting in an increase of 8%. The supervisors confirmed that the constructs described in T1 were still valid and relevant in T2. This consistency reflects the experience of the supervisors and their familiarity with potential transformative learning outcomes of the WIE work term experience.

The Table 34 displays the change in constructs for each case. Table 35 identifies the supervisors' constructs as mapped against the WIE academic program activity system and Table 36 identifies the supervisors' constructs mapped into the WIE work term activity system.

Table 34. *Summary of Supervisor Constructs T1 and T2*

Case	T1	T2	% Change
Case A	12	15	+14%
Case B	16	16	0%
Case C	10	10	0%
Case D	11	12	+9%

Table 35. *Summary of Supervisor WIE Academic Program Activity System Constructs T1 And T2*

Constructs	T1	Average T1 Mean	T2	Average T2 Mean	%Change in #	%Change in Mean
Tools	5	2.2	5	2.2	0%	0%
Subject	7	1.8	10	1.8	+43%	0%



<b>(Student)</b>						
<b>Rules</b>	2	2.3	2	2.3	0%	0%
<b>Communi ty</b>	0	0	0	0	n/a	n/a
<b>Division of Labour</b>	0	0	0	0	n/a	n/a

Table 36. *Summary of Supervisor Workplace Activity System Constructs T1 and T2*

<b>Construct s</b>	<b>T1</b>	<b>Average T1 Mean</b>	<b>T2</b>	<b>Average T2Mean</b>	<b>%Change in #</b>	<b>%Change in Mean</b>
<b>Tools</b>	17	2.0	18	2.3	+5.8%	+15% (weakens)
<b>Subject (Supervis or)</b>	6	1.7	7	1.8	+17%	+5.8% (weakens)
<b>Rules</b>	11	2.7	11	2	0%	-26% (strengthe ns)
<b>Communi ty</b>	7	2.1	7	2.1	0%	0%
<b>Division</b>	2	2.4	2	2.4	0%	0%

<b>of Labour</b>						
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In summary, the largest number of constructs (18) mapped onto the tools section of the workplace activity system, 11 constructs mapped onto workplace rules, and 10 onto the student as subject component of the WIE academic program activity system. The greatest change in the number of constructs between T1 and T2 was in the student (+43%) and the supervisor (+17%). The only showing of strengthening of constructs was with the workplace rules (-26%). Construct ratings weakened for workplace tools (+15%) and supervisor (+5.8%). This demonstrated that over time the strength of constructs changed, depending on the circumstances and reflecting the dynamism within and between these systems.

There are six common thematic categories that emerge from an analysis of all of the supervisors' constructs, and these are consistent with the thematic categories from the students. The first thematic category was the *opportunities to learn and apply learning* and, in the case of the supervisors, this included *training and resources made available, range of duties and roles, interactions with clients, application of relevant knowledge and making special projects available*. The second thematic category was *supportive environment* and included providing a *learning environment where "experiments are safe to fail"* (Case D supervisor), *policies and procedures that supported a safe environment, and encouragement to grow outside of the workplace*. The third thematic category was *assessment, feedback and reflection* and includes *setting learning goals, assessment using the competency framework and regular check-in meetings to encourage reflection*. The fourth thematic category was the *students' own capabilities* and was comprised of the

knowledge, skills and attributes that supervisors valued as enablers of transformative learning. These included: *maturity, professionalism, time management and prioritization skills, openness to learning, fresh perspective, interpersonal skills and the personal agency of the student*. The fifth thematic category: *team* included the *support, guidance and learning gained from co-workers and teammates*. The sixth, and final, thematic category was the *supervisor* and includes the *coaching, mentoring, provision of feedback, the supervisory style and having confidence in the student*.

Figure 96 illustrates that all six thematic categories had constructs that were identified as “very useful” enablers of transformative. The constructs for *opportunities to learn and apply learning* within the “very useful” category included terms such as: *providing a wide range of opportunities where students could apply their knowledge; giving clear instruction, training and briefings; allowing students to use their own judgement and experiences; allowing students to interact with clients*. Within this “very useful” category the terms to describe *student capabilities* were: *level of maturity, professionalism, interpersonal skills, ability to gain the respect of their co-workers and an understanding of what is important*.

The qualities in the *supervisor* that were seen as very useful included *the supervisor and student co-creating values and approaches to problem-solving, having confidence in the student and providing coaching*. Enablers that fell within the *supportive environment* thematic category were: *providing encouragement to grow outside of the work term, having a multidisciplinary treatment philosophy, and ensuring a safe environment with policies and procedures*. Very useful *assessment and reflection*

practices were identified as *setting learning goals* and *having regular check in meetings*. Finally, the very useful *team* enabler was having a small team.

Again, all six thematic categories had elements that were less strong. For *opportunities to learn and apply learning* these were *training on roles and rules*, *regular contact with community* and *being provided a range of opportunity*. Students' capabilities were: *openness to learning*, *being able to work independently*, *having a fresh perspective and recent experience*, and *realizing they have something of value to offer the team*. The competency framework and setting of learning goals emerged as useful as did the provision of feedback. The useful enablers that were part of a *supportive environment* were *encouragement to do things outside of the work term*, *having a multidisciplinary approach in the workplace*, and *providing policies and procedures to ensure a safe environment*. Supervisor enablers were about the supervisor's knowledge, in general and an understanding of what knowledge the students have. Finally, the useful *team* enablers were the *knowledge and experience of co-workers* and *having team-based work opportunities*.

Less useful constructs included all thematic categories except *assessment and reflection*. Less useful enablers grouped as *opportunities to learn and apply learning* were the *length of time as an employee*, and *opportunities to participate in professional development and be exposed to other program areas*. Similarly, in the *team* category *having connections with others in the department* was seen as less useful. Less useful student capabilities were *having prioritization and time management skills*, and *having relevant knowledge*. For the *supervisors*, having a hands-off style was perceived as less useful. Finally, for a *supportive environment*, a *flat hierarchical structure* and *the*

*provision of resources to do the job* were seen as less useful. These common constructs are mapped on to the WIE academic and workplace activity systems in Figure 96.

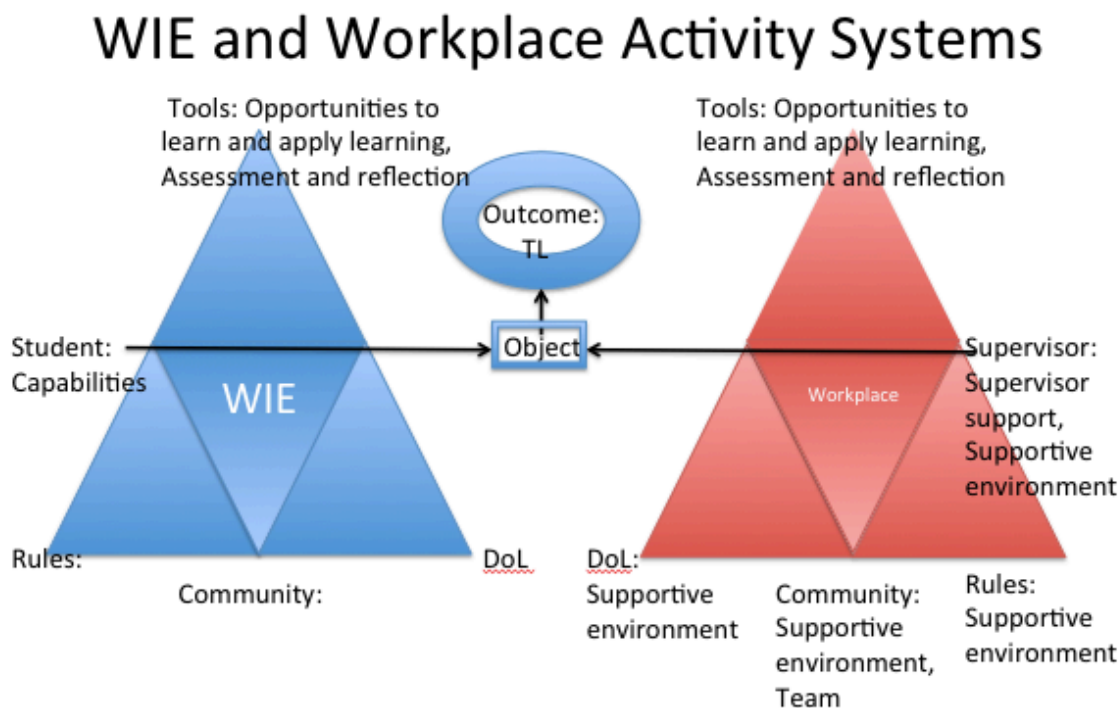


Figure 96. Combined Supervisor Constructs Onto WIE Academic Program and Workplace Activity Systems

Figure 97 shows the connectivity between the WIE academic program and workplace systems, as seen from the supervisor perspective. In this figure, the tools of *opportunities to learn and apply learning*, as well as, *assessment and reflection* connect the WIE academic program and the workplace.

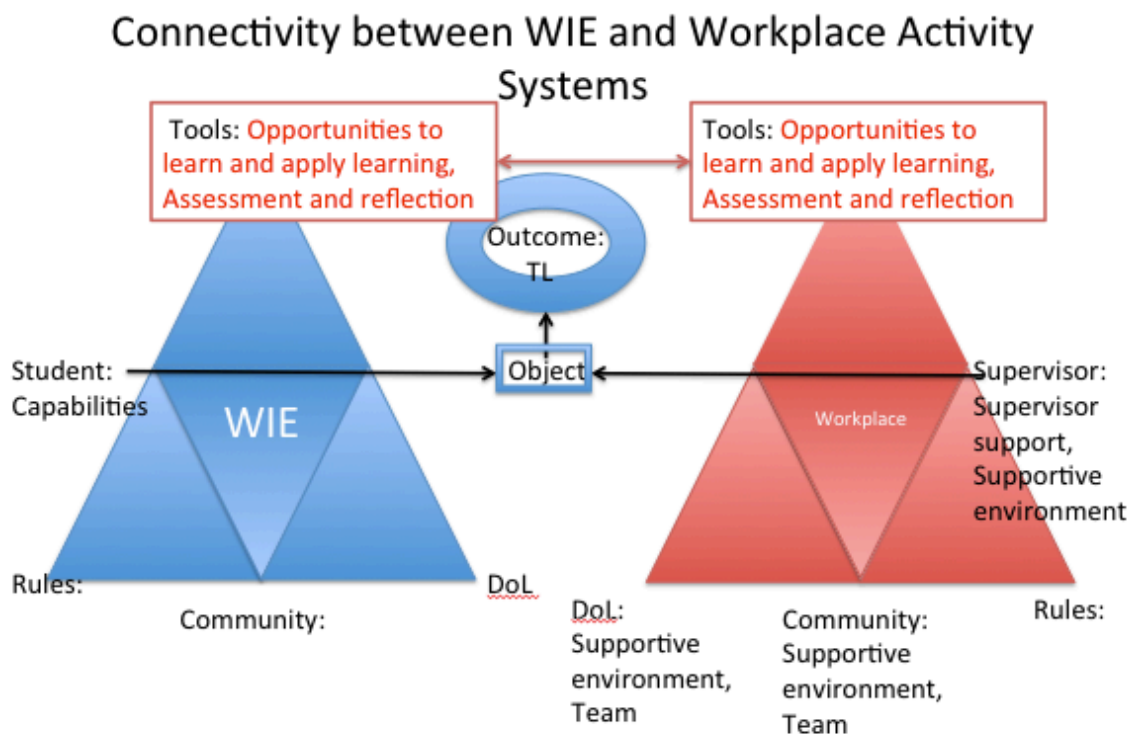


Figure 97. Combined Supervisor Connectivity

The final area of comparison was in the way in which the supervisors viewed the integration of the transformative learning back into the workplace and WIE academic program, as shown in Figure 98. All of the supervisors agreed that the transformative learning they had observed in their students was currently was influencing their workplaces, and predicted that it would do so in the students' future workplaces and likely in their return to school. They also agreed that the enablers of this transformative learning could also contribute to the integration of this learning back into the workplace and the WIE academic program.

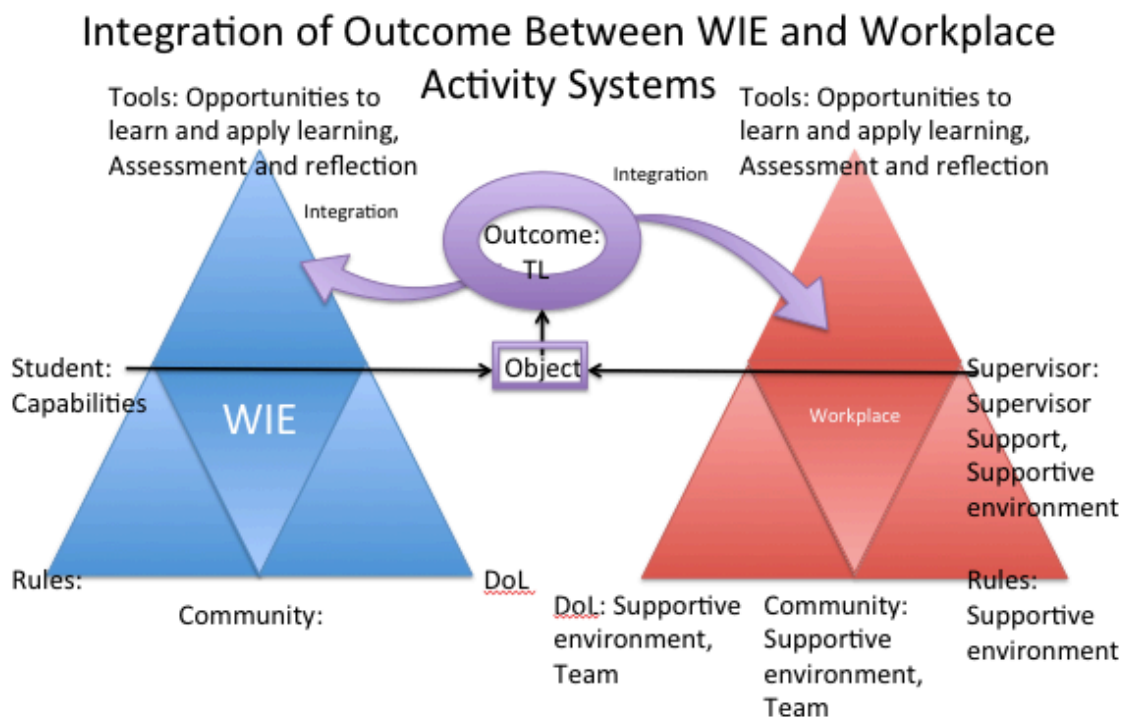


Figure 98. Combined Supervisor Integration

In summary, the supervisors expressed nearly 30 examples of transformative learning that they had observed in their WIE program students. These examples were most frequently positioned within the situative category, and, while the identification of these incidences remained stable between T1 and T2, some change in number identified in the psychoanalytical category was noted. This suggests that supervisors closely observed and valued student learning and in particular the growth in their learning. The categorization of the elements suggest that they felt that the results of transformative learning were skill development, the development of self-confidence and agency, an appreciation of the needs of the workplace and how they can contribute to and make a difference in the workplace. The supervisors also identified 53 constructs, 17 that mapped onto the WIE academic program and 44 that mapped onto the workplace activity systems

with several areas of overlap between and within the systems. These constructs could be combined into six main thematic categories: *opportunities to learn and apply learning, supportive environment, students' own capabilities, team, supervisor, and assessment and reflection*. All of these thematic categories have components that were rated as very useful and useful.

There were both commonalities and differences in the views of the supervisor when compared to those of students, which logically reflect the differences in current status, and range of experience.



## Chapter 5. Discussion

This chapter will provide a comprehensive discussion of all four cases in order to provide a fulsome exploration of transformative learning in a WIE work term setting, the main intention of this research. This study was conducted with a methodological approach that reflected the multi-dimensional and multi-factorial nature of this experience, and was designed to identify enablers of that type of significant experiential learning. Previous research although making important contributions to our understanding of the benefits of WIE (Crump & Johnsson, 2011; Patrick, Peach, & Pocknee, 2009) and student learning in WIE programs (Branton et al., 1990; Coll & Eames, 2007; Dressler & Keeling, 2011; Johnston et al., 2004; Linn, 2004; Rowe, 1992; Van Gyn et al., 1997a) has not considered the rich interaction of variables that bring about the significant influences of WIE that have been identified and documented in WIE literature.

While some of the expressed transformative experiences, as predicted by past research on WIE (Avenoso & Totoro, 1994; Bartkus, 2001; Bartkus & Higgs, 2011; Braunstein et al., 2011; Little, 1998) could be classified as constructivist, as defined by Fenwick (2000), many more appear to be compatible with Fenwick's descriptions of critical-cultural, psychoanalytical, situative and enactivist experiences. Although students in WIE programs are applying theory to practice and gaining skills in the work term experience, this study demonstrates that they are also gaining much more from this experience that enables them to become bone fide members of a professional community.

## Students' Transformative Learning Experiences

The transformation outcomes identified in this research have been demonstrated in other studies of transformative learning and include growth in self-awareness, self-confidence (Postle, 2000), self-formation (Dirkx, 2013), ability to act (Taylor, 1998) and the development of relational agency (Edwards, 2009). The WIE students appeared to have gained a broader perspective through their identified transformative learning experience, becoming more confident and better able to engage in these dialectical and mediated processes, resulting in stronger agency (Taylor, 2008), and self-efficacy (Bandura, 1987). The student empowerment that was evident as a result of the transformative learning experiences in work settings was consistent with transformative learning found or predicted in other research. The WIE transformative learning experiences appeared to reinforce ethico-moral stances, as described by Roth, (2009), improve their ability to integrate their learning in the workplace with stronger volition (Roth, 2007), and determine a clearer and realistic vision for themselves and their career paths (Holman, 1997). The identified critical cultural, situative and enactivist experiences enabled students in work placement to move from positions of legitimate peripheral participation (Lave & Wenger, 1991) towards legitimate integral participation and co-creation, for themselves and others (Merriam et. al., 2007).

From the RG analysis, it appears that the students' transformative learning was particularly supported by the enablers identified as: *opportunities to learn and apply learning, team member contributions, the students' own capabilities, and a supportive environment*. To a lesser extent, *supervisors who coached and mentored, assessment, feedback and reflection* received and engaged in during the WIE experience also enabled

this learning. Over time, and within this supportive environment (Boud et al., 1985), these enablers appear to interact through dialectical and mediated processes to create the conditions for reflection-in-action, reflection-on-action, and reflection-for-action (Schön, 1987). These processes included narrative, organizational and systemic critical self-reflection (Mezirow, 1998) that led to expansive learning (Engeström, 1987) and transformation of knowledge, skills, and attributes.

Interestingly, the strongest enablers (opportunities to learn and apply learning, team member contributions and student capabilities) would be most likely to be actively engaged in reflection-in-action processes, whereas coaching and mentoring from a supervisor, assessment and reflective practices would be most involved in reflection-on and reflection-for action processes. This may explain why the former enablers were rated more strongly as their influence might have been more evident in the daily, in the moment reflections that led to transformation. Furthermore, over time there was a shift in the strength of enablers, most notably in the quantity and strength of the students' own capabilities to facilitate learning. It was evident as the term progressed, and the students' self-confidence and self-efficacy increased, the T2 interviews revealed that students they were increasingly able to facilitate their own transformative learning.

An unexpected outcome was the extent of the influence of the workplace community, team members, and co-workers as enablers of student transformative learning. This finding points to the importance of considering and including the entire socio-cultural context, in addition to the supervisor and the work duties, when establishing and assessing the work placement. While the WIE academic program community was not identified very strongly as an enabler of transformative learning, this

could be explained by the timing of this study. The research was being conducted during a work term and, as such, the academic environment was not front of mind for the students. However, the learning from the WIE program, and its application in the workplace, was evident and frequently cited as a significant enabler.

This study makes clear, in the reflections of the students on their WIE activities, that positive support for WIE engagement, which came from a number of sources, was critical in enabling transformative learning. This necessary support was reported as emanating from, not only sources in the workplace, but also from the students' family and friends. The characteristics of this positive support extended beyond words of encouragement to include explicit expressions and actions of trust and respect and valuing student contributions to workplace success.

A significant enabler of transformative learning that is evident in this study is time in the learning environment, or time on task. The enablers previously identified are mainly related to workplace practices that facilitate the quality or depth of the learning experience or to the growth in personal qualities of the learner, whereas the enabler of time refers specifically to the length of engagement in these enabling practices. This is consistent with a wide variety of research on learning that clearly implicates not only the quality of the learning processes but also the time devoted to engagement in these highly effective processes (Ericsson, Anders, Kramp, & Tesch-Römer, 1993).

In two cases, the student had returned to the workplace for a second time. This longer period of time of engagement was described as valuable, if not critical, to transformative learning, by both of the students and their supervisors. The students identified how the extra time allowed them to have expanded opportunities and

increasing responsibilities and to build relationships. The supervisors commented on how this extra time allowed them to include students in decision-making and to provide additional projects and responsibilities. The supervisors felt that they had increased benefit from their investment in the student when the time in the workplace was extended. This time dimension reflected what Engeström (2009) referred to as “historicity,” the history that comes with a context and that is manifested in the ways things are done through rules and procedures, and the development of relationships (Engeström, 2009). As one would expect, the longer an individual is located within the context, and given that the context provides the enablers for quality learning, the more the individual understands, is able to adapt and respond to variations in the context, and move towards the role of bona fide contributor to the professional workplace.

In addition to elucidating the students’ transformative learning, the enablers of that learning, and the dynamic and mediated processes that contributed to it, this study also identified specific connections between the WIE program and workplace systems. As anticipated and, generally facilitated by all WIE personnel, applying academic knowledge in the work placement and assessing and reflecting on that application were shown to be boundary-spanning connections. These are connections that link the WIE program and the workplace systems together and provide mechanisms for interaction between the two systems that could allow for mutual learning between these systems. While the students did anticipate they would in turn take the learning from the workplace and apply it in their subsequent classroom terms, this was not fully explored in this study.

Finally, this study provided evidence that the zone of proximal development (Vygotsky, 1986) in the educational setting not only includes the student and teacher, but

also encompasses the WIE program and workplace communities as well as a broader environment of support that involves family and friends.

### **Convergent and Divergent Perspectives on Enablers of Transformative Learning**

One of the strengths of this study was in examining the question from multiple perspectives. The results from the supervisors confirmed many of the views elucidated by the students. There were many similarities from the supervisors' perspectives that coincided with those of the students, including that transformational learning occurred in the workplace and while it did reflect constructivist perspectives, also included critical-cultural, psychoanalytical, situative and enactivist perspectives. However, some areas of difference were found. Supervisors identified situative experiences that facilitated transformative learning, but identified more growth in the students as a result of their psychoanalytical experiences. From their vantage point, supervisors observed the changes in the students' self-confidence and efficacy as the work term progressed. Regarding the enablers of these changes, supervisors gave greater emphasis, than did the students, to the importance of workplace training, policies, and procedures that were made available to ensure that students were safe and successful. The supervisor perspective provided them with more awareness of the context of the workplace, whether non-profit, small business or community-based that contributed to the students' critical cultural understandings. The supervisors rated the use of assessment and reflective practices as more important than did the students in this process and employed additional reflective practices such as regular check-in meetings and debriefing sessions to advance the students' learning. This is likely as a result of their greater appreciation, from their workplace experiences, for the importance of reflection and more frequent recognition of the occurrence of reflection.

In contrast, students attributed the psychoanalytical transformation more to the belief of their co-workers and supervisors had in them, the respect they were shown and the feeling of being valued. While both groups referenced the relational epistemology (Taylor, 2005) derived from the coaching and mentoring of supervisors and the support and guidance of team members, the students also saw both supervisors and team members as role models, a view not taken by supervisors. Interestingly, the supervisors did not perceive work team members as being as strong enablers as themselves, which differs from the students' expressed perspectives.

Training, reflection, coaching and mentoring provided by the supervisors were dialectical and mediated processes that appear to have contributed to the transformational learning identified by students. The supervisors provided the time and acknowledged the value of critical reflection (Hanson, 2013) while on the job, by acknowledging learning objectives, engaging in competency assessments and providing feedback on performance, in addition to debriefing and check in sessions. This allowed the students to practice ongoing reflection-in-action, reflection-on-action, and reflection-for-action (Schön, 1987) and to have their insights mediated through narrative, systemic and organizational critical reflection (Mezirow, 1998). For example, students were invited to participate in a range of assessments, meetings, de-briefings and networking opportunities within a supportive environment. Their questions, application of knowledge, fresh perspectives and problem-solving were welcomed, creating positive emotional conditions. The students reported engaging in dialogue, troubleshooting and experimentation designed to help them learn and contribute in a safe, positive environment.

These processes, in these positive environments, created expansive learning (Engeström, 1987) that led to a significant change in the students' belief in themselves, their agency and their understanding of their place in the world (Taylor, 1998; Taylor, 2008; Edwards, 2009; Dirkx, 2012). These transformational workplace practices allowed for the movement of the students from a place of legitimate peripheral participation (Lave & Wenger, 1991) towards legitimate integral participation, helping them to become bona fide members of that workplace community and preparing them for other similar professional situations in their future.

The coordinator was familiar with the students, their WIE program, supervisors and workplaces and so, in some instances, the coordinator's views, although not in disagreement with student and supervisor perspectives, was more holistic. The coordinator was in agreement on the enabler of time, but considered time in a more expansive way. Her view encompassed the past, present and future that recognized that WIE programs and workplaces were evolving, dynamic entities (Roth, 2010). She acknowledged that students' past experiences shaped their current work as experience contributed to maturity, perspective and confidence levels. She talked about the time it took for a student to grasp concepts and develop skills, and the importance of time on task for learning. Similar to the findings of Linn (2004), the coordinator had the insight gained from interacting with many alumni who had shared that it took time, sometimes years, for the full realization of all that they had learned in their programs to be fully appreciated, and that it required extensive and ongoing reflection.

The coordinator's perspective reinforced that transformative learning is not time limited, but unfold much in the way water ripples after a rock is tossed. The initial "aha"



moment is when the rock hits the water, but the ripples of learning can be felt for long after that initial impact through subsequent reflections over time.

The coordinator's interview results were consistent with both the students and supervisors identification of enablers of *opportunity to learn and apply learning, feedback and reflection between the coordinator, students and supervisors*. There was agreement about a supportive supervisor who provided coaching and mentorship and with whom students could form trusting relationships. The perspective on the value of the team as a resource was also shared as was the recognition of the role of the student capabilities and the role of feelings of being valued that contributed to the growth in these capabilities.

The second area of difference that the coordinator perspective offered was the inclusion of faculty and fellow students as part of a supportive environment. The coordinator commented on the valuable learning that was gained when students had the opportunity to share their work term learning with other students and faculty. This happened, in this particular academic unit, as part of the regular poster session debriefings when students discuss the various learning outcomes from their work terms with students and faculty. It also happened in the classroom when students were called upon to discuss some of their learning and insights from their work term experience as they related to classroom topics. This perspective on faculty and fellow students as enablers was peculiar to the coordinator and reflects her particular role in the WIE process.

The coordinator commented on her own transformation as a function of working with students, supervisors, and within her own academic unit. She noted the learning she

had gained about listening, letting learning unfold, accepting students for where they were at in their education and in life, and not forcing her own agenda, in light of this understanding. This example of co-configuration (Avis, 2009) resulted from her interactions between the particular WIE program and a range of workplaces that she had experienced over time and demonstrated that she, too, had her own activity system activated by dialectical and mediated processes in which she had engaged in her career. In her interview, she specifically identified colleagues, location, and opportunities to interact with faculty, students, and staff as being mediators, or enablers.

The coordinator's final contribution to the exploration of transformative in WIE was her insights on the ways in which the dialogic and mediated processes must adapt and change with the conditions of the work term. For example, when students are not provided with thorough orientation or training, they need to intensify their questioning and seeking of clarification and be more independent learners. If they are not receiving the coaching and mentoring from supervisors or team members, they then need to seek out feedback either on the job or from others in their support network. Similarly, with a student who lacks confidence, the supervisor might need to frame incidents more intensively to point out potential areas for learning and transformation. The coordinator's insights introduced the idea of elasticity, in that the constructs must adapt in response to how the other constructs are acting and interacting in order to produce the expected outcome: in this instance, the outcome of an effective work experience, and potentially, transformative learning.

In summary, the multiple perspectives of the student, the supervisor and the coordinator each added richness to this study, in that similarities and differences in

perspective deepened understanding of how transformative learning is and could be enacted in the WIE work placement.

This study also identified the points of connectivity between the WIE academic program and workplace systems from the students', supervisors' and coordinator's perspective. The boundary-spanning mechanisms of the application of learning, and the assessment and reflection practices from the WIE academic program were most prominent. It was also evident that workplaces also derived benefits from the resultant co-creation and knotworking between workplace personnel and students. In each case there was evidence of students working with supervisors and co-workers to co-create solutions to problems, examples of knotworking. In each case there was also evidence of co-configuration as students were afforded opportunities to interact with clients who became additional actors in the co-creation of solutions, new programs and activities. It appears that in allowing and providing support for the students to interact authentically with clients, the co-configuration (Engeström, 2009; Yamazumi, 2009) that resulted appears to have contributed to organizational transformation (Tuomi-Gröhn et al., 2003). These connections allow for the possibility that both the WIE program and the workplace systems could also experience transformation, in addition to the transformation being experienced by the students.

As stated previously, it was not anticipated that the workplace community, the workplace team and specific co-workers would be identified as significant enablers of the learning. This has not emerged in the WIE literature to date, and in WIE practice the suitability of a workplace is determined by the work to be done (job description) and its relevance to the application of the student's current level of knowledge, skills and

attributes, the quality of supervision, and operational factors such as length of work term and salary. Given the findings of this study, more consideration might be given to the role that socio-cultural context of the workplace and the contribution that it could provide to the support of student learning.

As previously reported, an unanticipated enabler was that of the support of family and friends. In general, WIE programs do not consider how to make best use of that extensive support network. Often, students express discomfort about moving away for a work term and WIE personnel should be aware this might mitigate effective work term experiences. It may be of interest to explore ways to enhance connections for the student to perceived supportive communities to enhance the success of that work experience.

As suggested by the RG analysis, not all enablers are created equal, and do not have the same influence on all students. This outcome is referred to as elasticity in the system. Greater appreciation of this elasticity would allow for programs to develop contingencies and flexible approaches to supporting students, supervisors, and coordinators to make more likely the best results possible under any circumstance. For example, if a student is in a workplace where the supervisor does not act as a supportive coach or mentor, then the student might be advised by the coordinator to seek out these qualities in co-workers, coordinator or family and friend to compensate.

A concept that emerged from several sources in this study was that, in contexts that produced transformative learning, the effect may not be confined to the student. This rather interesting finding suggests potential for WIE programs to be more intentionally co-creative, and that this co-creation might include the workplace and the WIE program. While there were several examples in the narrative analysis of the changes occurring in

students' workplaces as a result of their engagement in the work placement, the only example of the student having an influence on the WIE academic program was through the effect on the coordinator. While the focus of this study was not to examine this question, this finding indicates that there is the possibility that workplaces and WIE programs can be co-created by the WIE experience.

Finally, transformative learning results in deep learning, lasting personal change that has the potential to lead to social change. Social change requires, in part, the capacity of the change agent to have the capability to have a holistic understanding of a context. The change agent appreciates the connection between reflection and action such that future actions are informed by reflection and are the results of reflection-for-action. The change agent also recognizes the power of a team working together towards solutions, and that more can be accomplished within a group context. The students in this study were working in community-based recreation and health programming oriented organizations and, as such, their learning exposed them to issues related to the needs of those with disabilities, the socio-economic and psychosocial determinants of health and healthy living, and the role that these organizations play in supporting healthy communities. Awareness of these issues, developing a holistic view, engaging in reflection for action and actively working within the context as part of a team all provided these students with the necessary ingredients to be change agents within their workplaces. For example, the student in case A resolved many challenges within her workplace, the student in case B developed resources designed to improve the contribution of future students towards the treatment plans of clients, in case C the student contributed within each facet of the organization leaving a powerful legacy for

that community-based agency and changing their perceptions of the capabilities of co-op students. In case D, the student created a positive change in the experiences of children and their families engaged in his programs resulting in a camp experience that was happy and satisfying. One of the possibilities that this study reveals is the potential for these students to continue to create social change particular to these issues as they move forward in their studies and ultimately in their careers.

### **A Model for Transformative Learning in WIE**

In this study, through the identification of enablers of transformative learning and modelling of the origin and effect of these enablers, through the activity theory framework, it appears that there are a number of elastic dimensions that could account for the variations in the impact of the WIE work term on student learning. These dimensions include:

1. Dialectical, mediated processes that occur within the WIE and the workplace activity systems that can activate transformative learning;
2. The dynamic connectivity between these two systems through boundary-spanning, knotworking, and co-configuration that support integration, or co-creation;
3. The supportive environment that creates a positive emotional state in the student and nurtures transformation and that can have its origin from the WIE workplace, the WIE academic program and/or from external sources of friends and family; and
4. Time (time in the workplace, time on task, time for critical reflection) to produce transformative.

The dynamic and evolving nature of these four dimensions describes the elasticity inherent in this model. As the coordinator pointed out, sometimes not all enablers of transformative learning are robust, in which case other dimensions may provide the compensation to produce transformative learning. For example, a student who recognizes that co-workers are not communicative or interested in the student's contributions might need to be more capable of engaging in dialectical processes as questioning or initiating dialogue with her co-workers. She might need to develop her own resources, identify her own community or create that supportive environment from family rather than rely on co-workers. Similarly, a supervisor might need to become more engaged in activating a weaker student's learning through feedback, framing and debriefings. More tools might be required, role and rules might need to be adjusted and co-workers might be increasingly conscripted to assist. Awareness of the range of enablers, the ways in which compensation for weak enablers may be enacted, and the possibilities for dialectical processes and agency influence how capably participants in the model can adapt to less than ideal circumstances.

Some enablers of transformative learning identified in this study were particular to a case; however, common to all cases were the following categories: *opportunities to learn, opportunities to apply learning, assessment and reflection, student capabilities, supervisor support, team support, and a supportive environment*. Which opportunities for learning, reflection and assessment, what student capabilities and types of support varied based on the student, the supervisor, the situation and whether the transformative learning was more constructivist, critical-cultural, psychoanalytical, situative or enactivist in nature (Fenwick, 2000).

The dialectical processes involved the interaction of these enablers as the students navigated their workplace experience. Students applied their learning and the tools provided to them, questioned, engaged with their friends, family, supervisors, co-workers and clients, experimented, implemented ideas, received feedback and assessments, listened, researched and reflected. These dialectical, mediated processes appear to determine how they engaged in reflection-in-action, reflection-on-action, and reflection-for-action. The narrative, systemic and organizational critical self-reflection that resulted from the enabling factors led to expansive, transformative learning as predicted by the work of Engeström (1987), Mezirow (1998) and Schön (1987). The extent to which they were able to engage in these processes were influenced by their own level of confidence, the opportunities afforded to them, and time in the WIE work setting.

The results from the narratives of students, supervisors, and coordinator suggest that WIE activity systems have connectivity that is in addition to the physical presence of the students who spanned both systems. In each case, the tools of applying relevant learning and assessment devices promoted by the WIE program, and required by the WIE work setting, acted as boundary spanning tools. In cases A and D, knotworking between the student and supervisor as they co-created programs, policies and procedures was evident. In cases B and D, co-configuration between the student, supervisor, team and client was identified. This connectivity bound the WIE academic program and WIE workplace systems more firmly together and allowed for the integration of the transformative learning experienced by the students into both systems.

A supportive environment included the enablers found within each system and also encompassed family and friends, thus expanding the zone of proximal development



described by (Vygotsky, 1986). This support was more than the provision of encouragement as it included respect, validation and role modelling. This environment provided the positive emotional conditions that nurtured engagement in healthy dialectical processes that could result in transformative learning and, subsequently, increased agency and more profound engagement on the part of the students (Roth, 2007).

While Engeström recognized historicity within the socio-cultural context of activity theory, the dimension of time within his theoretical perspective does not appear to specify the dimensions of time that emerged in this study. Although preliminary, analysis of the four cases revealed specific uses of time that contributed to the advancement of transformative learning. The time dimension includes the historicity referred to by Engeström (1987) that was embedded within the context of each case, as well as the experience level of each student, the amount of time spent in this actual workplace, time on task, and the time for reflection and integration after the fact.

Time spent on reflection-in-action, reflection-on-action, and reflection-for-action appeared to be a major contributor to transformative learning and subsequent change in the students' knowledge, skills and values. Time on task, spent in a supportive environment that encouraged reflection, appeared to support the movement of students from the periphery towards mastery within these communities of practice (Lave & Wenger, 1991). The more time the students had in the workplace, with the presence of the specific enabling workplace practices, students found increased self-confidence and self-efficacy. These findings suggest that these dimensions of time are an important addition to expansive learning theory, as described by Roth (2010). Changes in the types

of transformative learning and the strength of enablers identified prior to the work term, when compared to those identified after the work term, demonstrated the dynamic evolving nature of these activity systems, their subjects and their outcomes, as proposed by Roth (2010) and reinforced the impact of time, in its various conceptions, on the production of transformative learning.

All of the findings from the study were conceptualized as a model for transformative learning in WIE as found below in Figure 99.

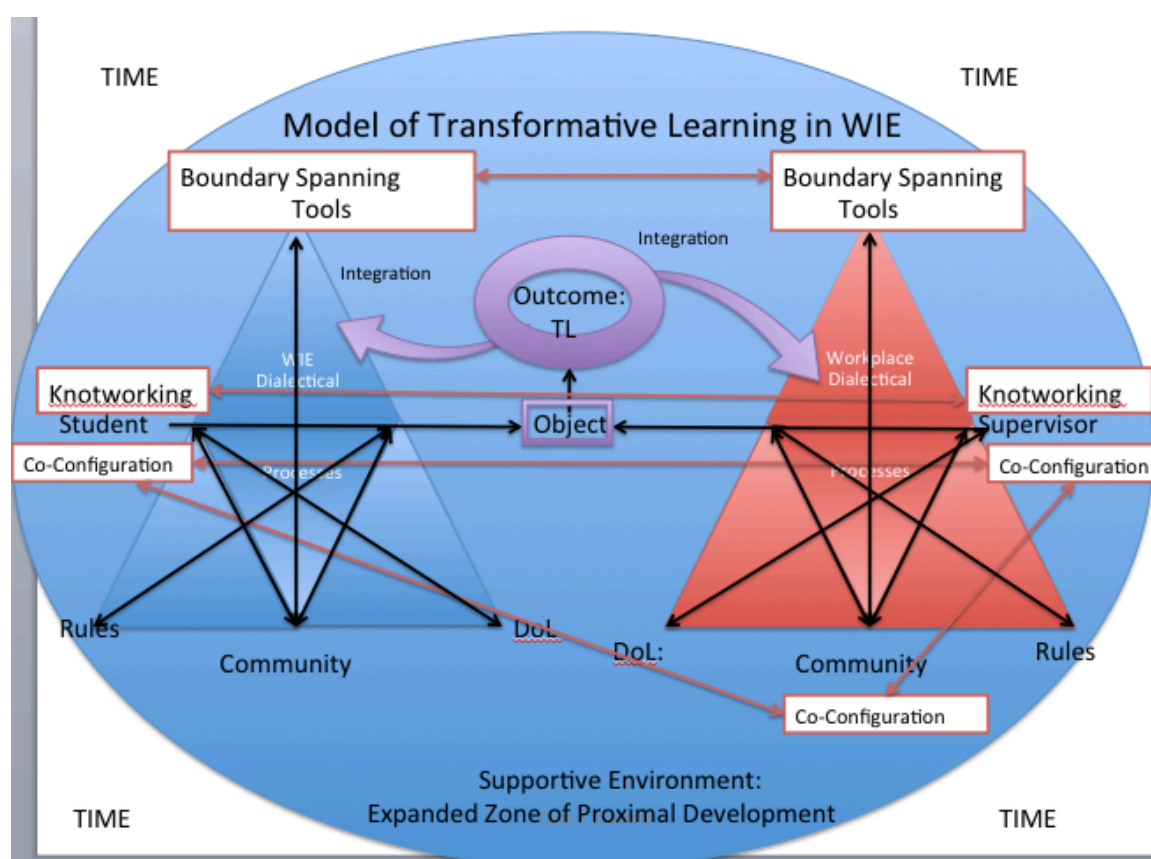


Figure 99. Model of Transformative Learning in WIE

## Conclusions

Regardless of whether the experiential learning is constructivist, critical-cultural, psychoanalytical, situative, or enactivist in nature, the activity systems model of transformative learning in WIE systems (Figure 99) may be helpful in elucidating the factors and conditions that can contribute to effective learning in WIE settings and, to a more limited extent, in the WIE program as a whole. The model provides a multi-dimensional view on learning in WIE that encompasses the perspective of the student, supervisor and coordinator. The model acknowledges enablers, dynamic processes, interconnections, an encompassing environment and the dimension of time. For students, supervisors and their coordinators, it may provide insights into more effective ways to prepare for a work experience, understand how learning on a WIE work term can be improved and how the outcomes from that learning can be integrated into the respective systems.

What this proposed model of WIE learning does *not* do is to specify the particular states of the enablers and processes as it is the interactions of these elements of the WIE system that determine the outcomes. Future research may, in the assessment of this model, reveal the specifics of this model to produce transformative learning.

Although the literature on reflection, transformative learning, expansive learning, and activity theory is rich and extensive, this study contributes to those bodies of work by examining these processes within the context of WIE, towards the development of an initial model for WIE learning. This study is distinctive in that this examination was conducted with a multi-dimensional perspective that increases our understanding of the emergence of transformative learning in WIE, the interactions that enabled that learning,

and how those interactions unfolded over time. For such a complex study that involved the description and analysis of four cases and three perspectives within each case, gathered through interviews at two distinct time periods, the use of the RG, the application of Fenwick's categories of experiential learning, and the narrative analysis were crucial analytical tools.

The RG allowed for the participants to generate, in their own words, elements and constructs, and, thus limited researcher bias. The elements and constructs were validated by the participants after both interviews, increasing the credibility of this qualitative, exploratory study. The RG provided a way to organize these elements and constructs in a way that allowed for ratings and comparisons within and between the three sets of participants. The use of the Fenwick categorization of experiential learning also provided the means by which to organize, in a coherent manner, the various types of transformative learning experiences.

While the RG and Fenwick's categorizations supported the identification of the elements of the transformational learning experiences and the enablers for those experiences, these analytical tools were limited in their capacity to provide insights into the importance of these elements and the enablers to transformational learning. The narrative analysis was helpful in expanding understanding of the way in which the enablers operated, but, in particular, why the enablers were important. However, the limitation of these three analytical tools was in their capacity to explain the ways in which the constructs enabled transformative learning.

The use of activity theory as a lens through which to interpret the results generated by the RG, Fenwick categorization and narrative analysis provided a holistic

theoretical framework in which to position the findings and to facilitate the examination of the interactions between the enablers in each WIE and workplace system and between these systems. The application of Schön's theories on reflection, Mezirow's transformational learning theory and Engeström's theory of expansive learning, activity theory provided explanatory power for how the constructs assist in the process of transformative learning within a framework that acknowledged the complex socio-cultural context of the WIE workplace experiences.

## Chapter 6. Implications

### Implications for Theoretical Frameworks for the Study of WIE

This study, while not prescriptive, nor definitive, presents an expanded and more holistic model for the study of learning in WIE. As previously stated, the theoretical foundation, either implicitly or explicitly, of most WIE programs is Kolb's Experiential Learning theory (Kolb, 1984). The assumptions of their theoretical model tend to be constructivist, in nature, and somewhat limited in accounting for the complexity of the WIE learning process. To address this particular limitation, this study was grounded in the activity theory framework, which enabled in the examination of the WIE system and transformative learning, considerations of the socio-cultural dimensions, as well as dialectical and mediated processes.

A second contribution of this study is that it reveals, in the four cases of WIE transformational learning, additional complexities in the reflective practice process. While Schön (1987) emphasized reflection as being key to learning, this study provides evidence that effective reflective practice requires more than solitary, dialogic activity and often involves others, occurs in the moment and can be unspoken. Consistent with Mezirow's (1998) position that critical self-reflection involves emotion and may be narrative, systemic or organizational in nature, this study reinforces the emotional dimension of critical self-reflection and implicates elements of the socio-cultural context, with dialectical and mediated processes, as supports for these various forms of critical self-reflection.

Engeström's theory of expansive learning, and resultant activity theory, provided the socio-cultural framework and the concepts of dialectical and mediated processes for

the examination of transformative learning in a WIE work setting. Dynamism was clearly evident in this study, shown in shifts in perspective from T1 interviews to interviews in T2. Dynamism was seen within and between each activity system.

An important contribution of this study is that it revealed that transformative learning in WIE, within the activity system framework and for these four cases, involved strongly identified dimensions of time and emotions. These dimensions are supplemental to the socio-cultural dimensions of tools, rules, community, division of labour of activity theory and suggest that their inclusion in the activity systems may contribute to the increased validity of this theoretical framework.

Combining these theoretical perspectives has produced a richer, more holistic perspective on transformative learning in WIE work terms and promotes a deeper appreciation of the many, complex factors that contribute to transformative learning in this multidimensional context.

### **Implications for Practice**

While this study was exploratory in nature and the main intention was to reveal evidence of transformative learning and its enablers, there are some general outcomes that could be useful in the assessment of WIE practices. The resultant model (Figure 99) derived from the analysis and interpretation of the student, supervisor, and coordinator interviews provides a novel approach to the development of transformative learning in WIE work settings. Each component of this model has implications for the practice of WIE and for the responsibilities and contributions of students, supervisors and coordinators and institutions of higher education to supporting transformative learning.

First, while WIE is primarily constructivist in orientation, the results of this study imply that students engaged in all the forms of experiential learning (constructivist, critical cultural, psychoanalytical, situative and enactivist) that Fenwick (2000) identified. Each perspective shaped and influenced the enablers of the students' transformative learning and the way in which those enablers interacted with each other and were supported over time.

This finding has implications for how students, supervisors and coordinators might consider supporting students before, during and after each work term. Informing students, supervisors and coordinators so that they are aware of these additional dimensions and that narrative, systemic and organizational critical self-reflection (Mezirow, 1998) can support this range of transformative learning, both during and after the experience. Regardless of the type of critical self-reflection, these practices should include reflection-in-action, reflection-on-action, and reflection-for-action (Schön, 1987) with consideration given to non-dialogic or written practices as additional ways for students to reflect and learn.

Second, as there was considerable agreement among students, supervisors and their coordinator as to the enablers of transformative learning (*opportunities to learn, to apply learning, to assess and reflect on learning experiences, student capabilities, supervisor, the team and a supportive environment*) and these findings are consistent with other studies of transformative learning. As a result, these enablers should be a serious part of the deliberations in the development of work placements.

As the strength and influence of these enablers shifted over time, and by perspective, demonstrating the dynamic and fluid nature of these systems, the choice of



work experience should be made not only on the characteristic of the workplace but also on the attributes of the student. Each circumstance will have a particular combination of enablers that have the capacity to contribute to a greater or lesser extent depending on the capabilities of the students and the characteristics of the work placement. Furthermore, as team/co-worker stood out as a very strong enabler, this suggests that efforts should be made to include team members and co-workers in the decisions regarding the choice of WIE work placements. The education and preparation of the team or co-workers for the engagement of the student in the work setting would be advantageous to an effective work placement and to the advancement of transformative learning. These findings should be taken into consideration in coordinators' decisions about appropriate work placements and potential education for those in the WIE workplace.

The dialectical and mediated processes that led to critical reflection shown in the proposed model, requires that the student have the confidence and the agency to engage in these processes. A focus by the WIE program on developing critical pedagogy that encourages students to be self-regulated, to challenge accepted knowledge, skills and values (Trede, 2012) and to explore beyond boundaries of convention might be helpful in supporting the building of confidence and agency, as would supporting conditions where supervisors, co-workers and coordinators would welcome challenging questions. With reference to the previous comments on preparation of supervisors and co-workers for the work term, this is a potential area for targeted initiatives to support the student in engaging in critical reflection in the workplace.

These processes related to the development of critical reflection appear to require a supportive environment and time. The results of this explorative study suggests that we

take a broad view of a supportive environment by including not only WIE program faculty and staff, coordinators, fellow students supervisors, and co-workers, but also family and friends. Each of these sources has the potential to provide the role modelling, validation and valuing to strengthen the confidence and self-efficacy of students and improve the probability of transformative learning to occur on his/her work placement.

A specific practice that could be derived from these findings is to broaden assessment activities to include input from students about the amount and type of support that they were provided in preparation for, during, and in the debriefing phase of their work term. For example, students could provide to coordinators a description and assessment of supervisor and co-worker support in a way that would supplement students' understanding of the ways in which their learning was advanced.

Additionally, reflection on the support provided by coordinator or faculty members to advance their learning could also deepen or broaden students' perspective on the factors that enable their learning. These possible additions to the traditional assessment of WIE workplace learning is based on a broader socio-cultural approach that goes beyond the student's performance and extends into the deepening of students' understanding of conditions that advance their learning (Zegwaard & Hodges, 2003).

Institutions and organizations that hope to support the integration of learning from WIE experiences back into the academic curriculum should consider building connectivity through the boundary-spanning devices, knotworking and co-configuration processes (Engeström, 2009) that emerged in this study and could be made more specific through further research. Boundary spanning could be enacted by individuals in addition to students, for example a researcher-in residence with industry and vice-versa.

Knotworking approaches could include the development of joint industry-university research projects, in addition to, or a result of the contributions made by students in the workplace.

This study showed co-configuration occurring between the student, supervisor and workplace community through the development of programming, client support and service delivery. Further co-configuration could include the WIE academic community as an additional partner allowing for joint research, projects and teaching. At Victoria University in Australia just such an approach is currently in process. In this instance, a series of shared projects have been identified by the local community, and in collaboration with the university, are working together towards shared solutions (Usher, 2012).

Institutions have strengths in research-based problem-solving and critical self-reflection among other things, and sharing this with community organizations could assist with organizational learning and renewal (Senge, 1990). Similarly, as community organizations, both profit and not profit, must have an external perspective and are continually responding to rapidly changing environments to maintain their viability. Their insights on the process to achieve these goals could inform curricular renewal and institutional learning.

The model of transformative learning in WIE that has been proposed in this study has the potential to inform the organizational basis of education for students, supervisors, co-workers and practitioners in WIE. This would update and enrich programs that currently refer to the work of Kolb (1984) as the sole theoretical framework for understanding learning in WIE.

One could infer from this research that there would be some benefit to WIE programs for supplemental education for WIE personnel that is theory-based and considers WIE learning from a socio-cultural perspective. Currently, one such program exists at the University West in Sweden that focuses on WIL pedagogy and is intended for academics and practitioners (University West, 2014). Similarly, training WIE leaders and senior administrator who oversee WIE programs should go beyond traditional administrative theory and be influenced by the multi-dimensional systems approach to WIE that has been profiled in this research.

This study showed that activity theory with its holistic approach that includes socio-cultural considerations allows for the identification and descriptions of personal and social transformation during WIE and subsequently to WIE practices. The contribution of this study indicates a need for the extension of the socio-cultural nature of the activity systems framework to include personal factors and specific dimensions of time. While this approach could prove to be a powerful tool for change, it must be recognized that the type of change advocated in this research and, as a result of the perspectives generated by activity theory, may not necessarily be welcomed in workplaces (Campbell & Zegwaard, 2011) or institutions of higher education that are attuned to a transactional rather than a transformational orientation to learning (Van Gyn & Grove-White, 2011).

### **Implications for Further Research**

This exploratory study took a multi-perspective approach to the question of what enables transformative learning by seeking the insights of students, supervisors and coordinator. Because of the application of both the RG, as a tool for analysis, and the

activity systems framework as a tool for data interpretation to advance our understanding of transformative learning in WIE, the avenues for further research are quite extensive, ranging from studies to assess the effectiveness of the RG in other WIE contexts to the critical analysis of the WIE activity system proposed in this research.

While the findings in this study confirmed the importance of reflection in-action, on-action and for-action as part of the dialectical and mediated processes that enable transformative learning, the setting of WIE and the simultaneous consideration of the student, supervisor, and coordinator perspectives have not been previously examined as part of a coordinated system for transformative learning. The proposed model for WIE transformative learning, therefore, should be further tested for its robustness and explanatory power. As well, the set of enablers identified in this study need to be studied for their efficacy in other WIE contexts to establish their importance in WIE transformative learning.

Furthermore, this study posits that the model presented is elastic in that it adapts and adjusts according to the relative strengths of its component parts. For example, if the supervisor is not interested in being a mentor or coach, how might other dimensions of the model adapt to compensate? Would co-workers or the coordinator be more intentional, would the student require stronger capabilities? The elasticity of the WIE system points to the need for intentionality in the preparation of all groups in the WIE placement process and in investigation of the efficacy of such intentional preparation would not only advance the model but give excellent direction to the development of WIE practices.

As the central question for this research was the enabling of transformative learning: it might be of interest to test other outcomes that WIE educators have been supporting as part of an effective WIE experience. One such outcome is cross-cultural transformational learning that has become of interest in WIE with the growth of international placements.

This study only considered the learning that occurred during the span of one work term, so conducting a longer study that included classroom terms as well as work terms would add to our understanding of the integration of learning. The function of time, and the life-long learning impact of transformative learning during WIE, could be further studied by researching alumni of programs rather than students actively situated on work terms, using activity theory as an augmentation to research done by Linn (2004).

A study that examines the activity system of the WIE coordinator would add to our understanding of what practitioners in that role require for their own transformation and advanced practice.

Finally, the researcher, students, supervisors and coordinator in this study all came from similar cultural backgrounds; of interest would be to examine this question with participants from other cultural contexts to determine the influence of cultural values on the enabling of transformative learning.

Regarding the concept of integration and connectivity, further research might be conducted into how the identified boundary-spanning, co-configuration and knotworking devices could work would be beneficial to creating closer ties between the academic and work systems of WIE.

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