"Shifts of perspective: a preliminary look at constructivism, phenomenography and socio-cultural learning theories"

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Introduction

This paper discusses cognitivism-constructivism, phenomenography and socio-cultural learning – three learning perspectives that share common aspects, but diverge in important ways. It argues that all three theories engage students similarly, but ultimately do so distinctly. The author draws on his own experience in teaching student librarians in order to highlight various social themes running through the three theories. The paper is followed by a brief exploration of the context, meaning and experience of the three perspectives. (1)

The behaviourist-cognitivist connection

The behaviourist-cognitivist connection can be viewed historically. The rise of cognitivism was a reaction against early 20th century behaviourists Pavlov, Thorndike, Watson (1936) and later classical conditioning theorists (Skinner, 1938). In keeping with the behaviourist tradition, the Canadian social-cognitivist Bandura and his disciple Walters (1963) affirmed that children need to perform and receive reinforcement for learning to take place, but observed that some behaviors are modeled simply by observing other individuals.

Cognitive theorists know that much learning takes the familiar stimulus-response and positive reinforcement pattern, but emphasize that "positive feedback about the correctness of something is more important than its role as a motivator" (Good & Brophy, 1990, pg 187). This distinction underscores the teacher's role in cognitivism, especially in terms of providing feedback and reinforcement at critical times to encourage student motivation.

Cognitivists emphasize the importance of active engagement with the surrounding world (Vrasidas, 2001) and creating schema (or patterns) where information can be processed and stored (Good & Brophy, 1990). Later, the so-called schema can be used for efficient retrieval as new information is presented, particularly as the learner negotiates deeper layers of complexity in his learning.

Cognitivist-constructivist

> ".. cognitive theorists view learning as involving the acquisition or reorganization of the cognitive structures through which humans process and store information." (Good & Brophy, 1990, pg 187).

In the cognitivist-constructivist perspective, knowledge is constructed (Vygotsky (1978), Bruner (1996), not transmitted. Knowledge is constructed by the learner, through a prism of his own experience. This bank of experience – also, mental structures or *schema* – forms the basis of cognitivism. The learner's prior knowledge-building and meaning-making is of primary importance to constructivists, referred to as the contextual framework (Ertmer & Newby, 1993). In this set of theories (2), knowledge results from individual constructions of reality (Eggen, 2001). When reality is constructed meaningfully, learners increase the likelihood of building knowledge.

As teachers know, most learning involves some struggle, even cognitive dissonance. Piaget (1973) believed that a state of *disequilibrium* was created when learners were presented with information conflicting with their existing schema. To resolve this, information is either adapted to the new situation (accommodation) where schema are modified, or new experiences are incorporated (assimilated) in some way into the framework (Eggen, 2001).

The instability engendered by disequilibrium occurs at various points temporally, and seeks to find resolution. This occurs in my students, especially at the start of term when things are new, and chaotic. New information is a stimulus for learning, which is why a new class of learners seems so full of promise. But a learner's ability to accommodate or assimilate new information is not spontaneous; I find that students take responsibility for their own assimilated knowledge when I help to engage them. One way to promote this is by designing learning projects according to the needs of employers; the in-class exercises I design must be grounded in that reality somehow.

Vygotsky put a great emphasis on how knowledge is transmitted through culture and language (Eggen, 2001). His interest in the cultural aspects of learning led him to his theory of the "zone of proximal development" which refers to "tasks that a child cannot do alone but can accomplish when assisted by a skilled partner" (Eggen, 2001). Often, with my students, I feel that I am less an adjunct instructor than a skilled partner or colleague in the learning enterprise.

As suggested, the design of collaborative, team-based activities must be rooted in reality (Doolittle, 1999; Fosnot, 1992). I try to design in-class exercises that promote *the social* and help students to monitor, evaluate and update their own understanding. I encourage my students to negotiate their understanding of concepts by anchoring them in real contexts, and presenting them to their colleagues in cognitively different ways.

If something has meaning, learners will remember it (Hounsell, 2005). During term, I bring student librarians face-to-face with actual patients; I select complex problems and encourage discourse as a means of rendering meaning. What information needs do patients express? What do you do when very ill patients (or families) get emotional? These questions foster cognitive apprenticeship, collaborative learning and social negotiation of ambiguity, all aspects of the perspective.

These pedagogical techniques emphasize that meaning-making is created through participation in socially, culturally, historically and politically-situated contexts (Vygotsky 1978). The critical aspect is participation in the social, especially dialogue with other learners. Through collaborative decision-making, learners take steps to support meaning-making, and encourage that in others.

The phenomenographic

Phenomenography is the empirical study of the differing ways in which people experience, perceive, apprehend, understand and conceptualize various phenomena (Marton, 1994). It "aims at description, analysis and understanding of experience" and is "directed towards experiential description". Another way of describing it – offered by a fellow student on the ALGC bulletin board – is "constructing understanding of a phenomenon by differentiating it from its context". (3)

Phenomenography is related to radical and social constructivism in that all three assert that people perceive reality subjectively. Contrasted with the heterogeneity of constructivism, phenomenography is a homogenous perspective, and differs further by emphasizing the qualitative. As such, phenomenography is not a body of theories but a conceptual framework used to understand learning (Giorgi, 1999). Phenomenographers resist homogeneity as a label and believe that phenomenography is a "still developing, socially and historically constituted tradition in educational research" (Ekeblad, 1997).

Tesch (1990) groups this theory within an envelope of methodologies striving to discern difference or patterns (variations) and commonalities among learners. "Discernment is at the core of our ways of experiencing the world around us… the discernment of variation or the experience of difference" (Marton, 1999).

In my training as a librarian, I am accustomed to discerning information needs. Reference interviews illustrate what physicians need to solve their cases. Over the years, as the complexities

of physician needs slowly revealed themselves to me, I learned how to discern variations, and how to interpret them for different clinical audiences, and contexts. "Individuals experience different variations of a phenomenon, learn to interpret the variations and place them in a context that is important to discern" (Marton, 1999). As so many of these patterns play out on a regular basis in my practice, I equate my ability to discern what library clients need with my own intuitive sense, which is like a sixth sense never far removed from my decision-making process.

Phenomenography should not be confused with ***phenomenology***, although both aim to reveal experience as the object of research. Phenomenography concerns itself less with individual experiences of reality and meaning than about the aggregated, collective experience, another distinguishing characteristic. I am especially interested in *perception* as it pertains to blogging, and plan to do a phenomenographic or phenomenological analysis of my students' perceptions of the act of self-negotiation in digital spaces during my sabbatical year.

Phenomenology is associated with the identification of two opposing approaches: *deep* and *surface* learning (Marton, 1994, Entwistle & Svennson, 1997). A deep approach is an attempt to understand ideas beyond the textual, to reveal ideas *sub rosa* and to connect them to prior knowledge. A surface approach is concerned with reading the text, perhaps memorizing passages - but not going further. (The deep-surface metaphor of learning is also applicable to the behaviourist-constructivist dichotomy, incidentally.) I have found deep and surface approaches relevant in teaching. Teachers discern clues about how and what is learned from their students; especially how they feel about what they are learning. By speaking to them, a number of qualitatively different ways of understanding the world may be identified (Marton, 1994).

Socio-cultural learning

Socio-cultural learning is *situated* with real-life actors and situations. Situated learning gives the student an opportunity to learn and create meaning from his personal experiences (via thought and action, and language and culture) in 'real life' organizations (Brown, 1989). The knowledge organized by this perspective is linked to its context, via interaction with peers, as with social constructivism. As such, experience determines the learning structure rather than the teacher, who does not direct content formation.

Lave (1997) and Wenger (1998) say that socio-cultural learning gives primacy to the dynamics of everyday existence; it also addresses the creative and interactive. According to Wenger (1998), human engagement with the world is "a process of negotiated meaning. The experience …is not produced out of thin air" (Wenger, 1998). Wenger describes the "negotiation of meaning" as how we experience the world and engage with it.

In his model, negotiation consists of two interrelated concepts: *reification* which is central to every practice, and involves turning abstract notions into *congealed form;* and participation which requires active involvement in social processes. Take, for example, the singer who wants to learn how to be a successful choral singer. Put that singer in a choral milieu. By singing music of increasing complexity, and breathing synchronously with other singers and conductors, the real activity of singing creates a situated experience that singing alone would never provide.

For a number of years, I have felt intuitively that the best learning takes place within a professional milieu, in the library – *in situ*. To that end, I recommend practical experiences and apprenticeships in libraries to *reify in congealed form* that which has been abstract (Wenger, 1998). Bringing librarians and physicians together is a powerful way to situate learning, to motivate and create meaning for students as they build their experience interacting in real situations.

Lave (1997) and Wenger (1998) say that socio-cultural learning gives primacy to the dynamics of everyday existence; it also addresses the creative and interactive in learners. Despite a familiar envelope of experience, learners reinterpret, re-engage and re-cycle their understanding of "what is" in this context, and consequently strive toward ever-deepening levels of meaning.

Curiously, universities and other institutions of higher learning, while seemingly devoted to teaching and learning "are based on the assumption that learning is an individualized process, that it has a beginning and an end, and that it is best separated from the rest of our activities, and that it is the result of teaching" (Entwhistle). This act suggests a single-minded directedness by teachers.

However, Wenger argues for adopting a different approach in terms of how to perceive teaching and learning. He suggests that learning is essentially a situated and social phenomenon created by student learners. Wenger and others [Brown, Collins, & Duguid (1989), Green (1997), Lave

(1988)] and Lave & Wenger (1991) posit the idea that how, where and with whom a person acquires a specific set of skills and knowledge serves as the basis for what is learned.

According to Wenger (1998), the social, participative nature of learning requires "deeply connected and mutually defining" elements that allow us to define a social theory of learning that is the basis for a community of practice:

> 1) Meaning: the way in which we make sense of the world both individually and collectively;
> 2) Practice: the exercise of a profession and the socio-historical frameworks (i.e., resources and perspectives) that "sustain mutual engagement" in how we learn and what we do;
> 3) Community: the social configurations of a group of people sharing a common element or interest that can be defined as "worth pursuing," wherein participation is recognized as "competence;" and
> 4) Identity: the characteristics by which an individual is recognized or known in the context of our particular communities. (Wenger, 1998, pg 5)

Whereas the learning that takes place in larger "networks of practice" is static, a community of practice allows for collaborative learning. Observation of activities is followed by the hands-on (Lave 1997). Ongoing learning and knowledge-building is a result of both reflecting on previous experiences, and new experiences acquired in subsequent 'situated learning' episodes.

Every year, I consciously work towards the creation of a *community of practice* with my students. I make it possible, however, for students to gauge their own participation in the CoP, and suggest that their motivation to participate is proportionate to their knowledge and comfort levels.

Conclusion

Teacher-guided "communities of practice" may seem contradictory in the context of the learning needs of individual students, but this paper suggests that any tension resulting from this duality is adequately resolved through skillful teaching (or facilitation) as students strive to meet their own learning. The emphasis of *the social* is pronounced in constructivist and situated learning theories, but can also be discerned on the periphery of phenomenography. What binds all three theories together is the notion of the *experiential* –the idea of a learning experience that leaves an undeniable, powerful psychic footprint – shaped by events in the classroom. In that sense, the classroom is a sacred place, one which deserves our greatest respect and attention as we endeavour to influence and direct our students' learning accordingly.

An exploratory matrix of context, meaning and experience of the three perspectives (1)

Theory	**Constructivism**	**Phenomenography**	**Social Learning**
Representative theorists	Piaget, Bruner, Fosnot, Doolittle, Eggen, Vygotsky etc.	Marton, Hounsell, Entwistle, Ekleblad Svensson, Giorgi, etc.	Lave, Wenger, Brown, Collins, Duguid, Kirschner, Whitson, etc.
Key quote	Learners actively construct knowledge based on experience, beliefs and attitudes; learners accommodate, assimilate knowledge	Investigates differing ways people experience, perceive, apprehend, understand, and conceptualize various phenomena (Marton).	Learning is contextual, embedded in a social and physical environment (Wenger).
Central tenets	Internally constructed reality shaped by the learner based on previous mental structures	Constructing understanding of a phenomenon by differentiating it from its context.	Interaction with and observing others within a social, communal context.
Goal	To construct knowledge and build successfully on existing;	To explain and address variations in learning;	To model; guide new roles and behaviours; access new knowledge
Teacher's role	To facilitate and guide meaning with learner, make learning relevant; design with framework	To prepare experiences that account for variations in intelligences	To facilitate, mentor, model, assume locus of control
Learner's role	To participate, discuss, reframe, listen	To discuss and think about phenomena, and articulate perceptions	To participate, interact, listen, reframe concepts, socialize; *reify* negotiate meaning
Application	Group work, critical reflective practice, blogging, student-selected projects, discussion	Develop a suite of learning styles to move within categories; ability-based design;	Small groups, field trips, hands-on, exercises, apprenticeships, building a community of practice, inservices
Context	Emphasizes the individual; the *schema; context* is existing knowledge, values, attitudes, beliefs, experiences, frame of mind, prejudices, etc	Emphasizes individual perception, but collective experience too; *physical* context/settings as they relate to phenomena are relevant; so is the affective.	Emphasizes *situated* learning; literally *in situ;* in context; learners may find themselves at the centre, or margins (periphery) of a community of practice.
Meaning	Learning occurs when *meaning* is constructed by individuals; learners develop understanding which renders meaning through reflection;	Meaning is created by the learner's understanding of phenomena, and motivation to learn from same;	Internalized meaning; meaning is experience negotiating the social, learners create meaning; engagement with the world creates meaning;
Experience	All experience is relevant to learning; past experiences shape future experiences;	Discerned variations of experience help us to understand learning; negative and positive experiences are equally instructive;	Active participation in the social; how learners engage determines experience; the social aspects keep learners motivated

Notes

1. This exploratory matrix is a snapshot view of my understanding of the three perspectives, my reading of representative theorists (see references) juxtaposed with key points in context, meaning and experience. Notice the considerable duplication within and across the learning theories. In formatting it, my mind did return periodically to Song-ee's directive of *integrating* the three concepts of context, meaning and experience into a narrative. However, I found this difficult to do, and ultimately opted for this. Upon receiving a critique of my draft, I decided to explore context, meaning and experience as one of my colleagues had (ie. Kirsten Playford). In any case, I am still struggling to find an appropriate narrative for my ruminations and delineations of these concepts.

2. There are three main types of constructivist approaches, namely: I) the **cognitive** model where knowledge is acquired, internalized and constructed based on an external reality; II) **radical** model which focuses on what is or has been experienced in the mind and not the external reality; III) **social** model is a blend of the cognitive-radical where the "social nature of knowledge is maintained" (Doolittle, 1999, p.3).

3. This quotation comes from a post by Michael Christy in the Blue Group, made on Friday November 10th; I have quoted it *in toto* as his description is concise and clear. Thanks Mike.

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