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Section I. Introduction

Constructivism is a theory of learning in which learners learn based on previous experience (Fosnot & Perry, 2005) and teachers share their own learning, interpretation and thoughts. Learners may find that they have different interpretations of the same information. This paper reflects how health care providers construct knowledge. By socializing, communities are creating metaknowledge (Gardener, 2008) when putting together interpretations, meanings, values and culture. This is a fusion of each individual's interpretations, as they each have their own flavor. So, this identifies individuals as multidisciplinary learners. This paper reflects how health care providers create quality community knowledge when following the constructivist learning theory. Heins' (1991) and Fosnot and Perry's (2005) research papers on constructivist learning theory are merged in two tools (see attachments A and B) in order to be applied to the health care sector. These tools promote discussions among HIV health care providers in Minnesota to balance knowledge equilibrium in the Health care quality system.

Knowledge is the amount of information which individuals think is valid and connected with their realities. For example, learners can construct knowledge by performing activities to experiment and manipulate their real world. Thus, they are updating the concept they have. As a consequence, learners are moving to or adjusting own and communities meaning about same the concept. I argue that individuals construct knowledge by sharing their interpretations which emerge as amalgam or metaknowledge (Gardener, 2008).

Learning is the association of current and previous concepts by building connections. The cognitive evolution (Fosnot & Perry, 2005) explains by acquiring new knowledge, learners assimilate new ideas. By accommodation, learners are perturbed, learning contradictions or the need to reorder cognitively (Fosnot, 2005a). As a consequence, in the constructivism learning theory, individuals create knowledge based on assimilation and accommodation of their experiences which occur when failing to understand meaning or contradiction. Contradiction exists when learners carry out their own mental actions and find they are not acceptable but channel learners to experts' ideas and meanings. By contradicting, learners are acting as if their thoughts and actions are not working. Accommodating and contradicting are evidences to change their knowledge equilibrium or omit the need for a change. Learners' contradictory thoughts put evidence what works and what does not work. The contradictions regards assimilation of ideas creates a disorder of meanings. It is resolve by organizing the knowledge structure of equilibrium of knowledge by replacing learners' old meaning by new ones.

Human beings tend to make connections between their thoughts and external social environment. When contradictions arise, new knowledge provides new ways to understand their interpretations (Fosnot, 2005b) and that is the moment when the meaning making process occurs.

This paper reflects how health care providers will develop and implement community constructed knowledge of the quality of HIV health care in Minnesota through the constructivism learning theory. This paper is organized in five sections. Section I introduces the thesis and its organization. Section II explains both the theory of learning proposed by Heins (1991) and Fosnot and Perry (2005). The theory of learning describes how structures, language, activities and meaning making processes come about (Fosnot & Perry). This theory is

characterized by the structures and stages, thoughts, or isolating behaviors learned through reinforcement. By assimilating and accommodating both perspectives, Section III describes how providers and health administrators will design the HIV quality common vision in Minnesota by constructing and negotiating meanings through the constructivism learning theory (see attachment A). Section IV discusses the argumentation process and how supporters and opponents interact to put theory in practice. Finally, Section V concludes and makes recommendations.

By providing community members the opportunity to relearn, they are revisiting concepts which strengthen current knowledge or updating their thoughts which can change by creating new connections.

Section II. Theory of learning and constructivism to make meaning.

According to Fosnot and Perry (2005) through the theory of learning, individuals construct knowledge by focusing in three areas, and those are behaviorism, maturationism and constructivism. By implementing these three steps, learners abandon their previous knowledge by making connections between their perspectives when associating their thoughts and connecting with their community and realities. Fosnot and Perry reflect on the biological landscape of learning to explain that social interactions imply that constructivism is driven by culture, interpretations, transformations and negotiations. Through this process, learners are building their meanings, relearning and creating knowledge.

On the other hand, Heins (1991) argues the constructivism learning theory states that individuals share their interpretations by following nine principles, and those are (1) learning is an active process; (2) people learn as they learn; (3) the crucial action of constructing meaning is

mental; (4) learning involves language; (5) learning is a social activity; (6) learning is contextual; (7) one needs knowledge to learn; (8) it takes time to learn and (9) motivation is a key component in learning. Heins proposed that people develop knowledge by connecting their inner and external realities. There is no theory of teaching; instead a theory of learning (Heins, 1991).

Thus, learners create their meanings by connecting sensory data. It means what perceive through their actions and making interpretations reflects their knowledge. For example, Heins (1991) states that individuals' sensory data, feelings, motivations, environment, and time interfere with learners' construction of both knowledge and meanings. In addition, Heins proposes that people need to construct meanings and use the associated methodology. Heins explained an example in which learners' learn historical data in a sequence and understand its meaning. I argue learners perceive their world is as they think and not as it is. A gap is created by a disconnection of either thoughts or feelings and the contradictions that reflect that knowledge do not work. So, equilibrium is established by understanding the contradictories ideas.

Through the theory of learning, Heins (1991) intertwined the learners' process to acquire knowledge from their social environment via either perceptions and thoughts and connecting themselves to life experience which is an individual phenomenon. As a consequence, individuals are making knowledge and meaning through their interpretations. Heins also proposes that the meaning starts in individuals' minds, but there is a need to interact with others when making interpretations because knowledge construction is not isolated.

By their theory of learning, Fosnot and Perry (2005) reflect on three aspects of learning theory; behaviorism, maturationism and constructivism. Behaviorism states that learners respond to a physical stimulus. By teachers' explanations and their feedback, individuals are developing

skills and becoming competent in specific areas. By maturationism, Fosnot and Perry (2005) correlate learners' professional experiences when they create meaning of knowledge. As a consequence, learners are interpreting their realities which increase their capacity to strength their knowledge. In addition, individuals have different needs when they are growing up. As a consequence, teachers must perform different curricula driven by the age of their students which reflect learners' needs.

Constructivism states that learning is not linear. In fact, when the equilibrium learning system is perturbed, new ideas come to individuals. For example, I argue that learners are always inside a turbulent environment because knowledge is always changing and interacting with others perspectives. This creates a perturbation but increases a common environment among learners by creating a common vision. The cognitive evolution reflects how humans create or update knowledge. Through their cognitive evolution, humans share their meanings by assimilating new knowledge or updating or accommodating old knowledge (Fosnot & Perry, 2005). When accommodating, perturbations of learning provide an opportunity for learners to expand their knowledge.

Learners need to assess their principle of learning following Heins' (1991) perspectives and combining the three learning aspects proposed by Fosnot and Perry (2005). This association will create a collaborative perspective when learners perform a learning activity following their interaction perspectives and then sharing with others. In the next section, I will describe how quality health care administrators can consider creating common knowledge by applying the theory of learning proposed by Heins (1991) and Fosnot and Perry (2005).

Section III. Constructivism learning theory: putting theory into practice.

There is a need to create a community to measure the quality of HIV health care by assimilating and accommodating health metrics, statistics, quality strategies, improvement projects and management. Currently, there is no agreement among several HIV health care centers in Minnesota. Each organization has its own interpretation about the same facts. By implementing the knowledge construction rubric (see attachments A and B) learners will merge the theories of learning proposed by Heins' (1991) and Fosnot and Perry's (2005). As a result, the HIV health care providers will construct a common vision about their interpretations and will assess their method to construct meaning on their own, through their community and outside the organization they work.

By applying attachments A and B, HIV health care providers can create new knowledge, reinforce current knowledge, and re-learn knowledge by abandoning current knowledge ones and replacing for it with new information. For each item in attachment B, health care providers are required to find connections with developing a deeper understanding of constructivism. Secondly, every item will require the learning community to fit in with participants' cognitive behaviors and ideas maturating. By discussing their professional experiences in the nine principles proposed by Heins (1991) in attachment A, health care providers are creating their own meaning of knowledge, which merges behaviorism, maturationism and constructivism. Once health care providers apply attachments A and B, they will develop a report which will explain the assimilation and the contradictions of ideas and the nine principles proposed by Heins. Thus, the explanation will apply the theory constructivism learning theory following Heins' (1991) and Perry and Fosnot's (2005) principles.

HIV health care providers require to analyze their own, internal and external organization. As a general evaluation, learners are required to look for findings in these three perspectives. The general evaluation will include to fit Heins, Fosnot and Perry's perspectives how participants' ideas will construct knowledge when connecting diverse information. Their knowledge construction is not linear, but through their discussion, learners are looking for their learning equilibrium accommodating new knowledge. According to Fosnot and Perry, assimilation, contradictions and accommodation of knowledge creates a balance of knowledge by disordering learners' cognition. It results in learner's evolution or growth as learners.

By creating a report which merges all perspectives, individuals will share their point of views and create a common vision of HIV health care. The report will merge health care providers' feedback by constructing knowledge and meaning through participants' sensory data and feelings, motivations and their social environment. Thus, their knowledge will not be isolated. HIV health care providers' professional experience will enrich each other when they are nurturing each other and they are growing up by their participations.

Section IV. Discussion.

Heins (1991) and Fosnot (2005a) proposed two perspectives to understand the constructivism learning theory which are included on both attachments A and B. They have different explanations for the construction of knowledge. As a facilitator and researcher, I intended to create a quality community in the state of Minnesota. However, participants felt confused in how to implement these tools, see attachments A and B. I argue they struggle to contradict their cognition of knowledge and the equilibrium was not achieved. Both health care providers and I need to interact more, to define quality community goal in the state of Minnesota.

There were assimilation and contradictions we found, but no common meaning was encountered. The attachments A and B combine Heins' (1991) and Fosnot and Perry's (2005) constructivism learning theory. Similarities and differences arise when building HIV health care communities.

I found similarities between Heins (1991) and Fosnot and Perry (2005) about learning speed and behaviorism. Heins reflects on learning theory when saying learners have their own speed to learn and internalize the concept. Fosnot and Perry (2005) express a similar concept with behaviorism when educators spend their time developing organized curricula. Both Heins and Fosnot and Perry are creating a system to learn meanings in which learners are carrying out their mental actions to channel their instructors' ideas. So learners are behaving similarly. By applying the knowledge construction tools (see attachment A and B), I assimilate how agencies can connect by performing collaborative projects. Furthermore, I contradict my thoughts when as a part of the quality community, we are making knowledge and meanings with isolated interpretations by responding our agency need to a physical stimuli. Thus, I assumed that other organizations were ignoring differences of knowledge. Moreover, I accommodate my interpretations by changing my previous ideas to find the connection with my reality and my perceptions. By doing this, I intended to create a new construction of knowledge in which we can dynamically equilibrate (Fosnot & Perry) notions about HIV health care services. Those learners who achieve their behavioral competence can teach other learners who are in the assimilation process.

I encountered differences in both Fosnot and & Perry (2005) and Heins (1991). The differences are the negotiation of meaning such as now the taken-as-shared meaning describes how a learner can tug and pull knowledge from their community or social environment (Fosnot

& Perry, 2005a). According to this model, individuals' experiences are shared by constructing knowledge from their community. Heins (1991) describes this process as a social interaction when considering traditional education and progressive education in which the isolated learners from social interactions define the social construction of learning. Fosnot and Perry promote the mentoring role between individuals which help them to achieve their behavioral competence. Heins does not present evidence of learners' mentoring roles.

Individuals need to balance their interpretations when applying Heins' (1991) and Fosnot and Perry's (2005) findings about constructivism learning theory. Interpretations are individuals' understanding about their reality and are created by social interactions.

Section V. Conclusion and recommendations.

Learners construct knowledge from previous experience and they share their meanings creating a common interpretation. Behaviorism, maturationism and constructivism reflect no linear, interpretive, recursive processes in which active learners shared their interpretations by the tug and pull information in their community.

An individual becomes behavior competent, and he or she is a master in their area and can learn by teaching. This process will include the assimilation, accommodation and contradicting of knowledge.

By implementing Heins (1991) or Fosnot and Perry (2005), constructivism is a theory of learning in which interpretation and life experience plays a fundamental role in creating knowledge. Both perspectives are included in attachments A and B. Individuals interact with their community sharing their values, thoughts, their knowledge, meaning, behaviors and they

are assimilating or accommodating their individual interpretations. As a consequence, they are learning inside the equilibrium process of learning.

I recommend updating the knowledge construction tool attached to this research so that utilizes the constructivism learning theory. As a consequence, individuals can easily understand their cognitive evolution when negotiating meaning themselves and with others.

Reference

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Attachment A

GED 8998: Knowledge construction.

TLRS #1, Part A

You have been hired to create a collaborative group in your community. As a facilitator, your task is to make a verbal and/or written report about how you construct your individual knowledge, your interactions within your organization and the interconnections with government and external organizations.

Develop a consistent report based on the nine learning principles proposed by Heins (1991) cognitive constructivism perceptive. The nine steps proposed by Heins are included in the attached rubric. Focus on one community you are currently serving.

As a researcher, you will use a psychometric scale, called Likert's scale in every item, specifying the level of agreements or disagreements (Wikipedia, 2009) from self (S), internal (I) and outside organizations (O). Likert's scale assesses every item in the following rates: (1) strongly agree, (2) Agree, (3) Neutral, (4) disagree and (5) strongly disagree. Finally, you will report and connect your insights and lessons learned.

Rationale. To create a common vision by looking through the points of knowledge of self organization and external organization you serve. You need to customize services or products providing what are wanted and needed by seeing other perspectives.

Analyze group interactions by observing how learners interact in order to create new knowledge. First read the rubric (see attachment B).

Learning goals. Find the way people create new knowledge, reinforce current knowledge, and re-learn knowledge by abandoning current thoughts and replace with new information. For each item, you are required to find connections by developing a deeper understanding of constructivism. Secondly, every item will require to fit with participants' cognitive behaviors.

Format assessment. You will be required to look at key points in your own (S), internal (I) and outside (O) organization. As a general evaluation, you will be required to look for findings in these three perspectives. The general evaluation will explain Heins (1991) and Cobbs' (2005) perspectives on how participants' ideas will emerge constructing knowledge when connecting diverse information. Key finding must follow the attachment B.

As researcher, you will rate yourself using Likert's scale for every item. Likert's scale assesses every item with the followings (a) strongly agree, (2) agree, (3) neutral, (4) disagree and (5) strongly disagree. Finally, you will report and connect your insights and lessons learned based on Heins (1991) and Cobb (2005) proposed perspectives in the attached rubric.

Attachment B

Use this rubric 3 times. Once from the point of view of self, once from the point of view of an internal organization and once from the point of view from outside of the organization.	Likert's scale				
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**
Nine learning principles					
Principle 1. As a lerners, I use sensory input and construct meaning out of it. It means learning does not exist out there and you need to engage with the world.					
Principle 2. As a lerner, I can start to connect your thoughts and realities to construct your meaning, building ideas to develop your answers.					
Principle 3. As a learner, you are inextricably intertwined to your language when you are learning.					
Principle 4. As a learner, I am interacting with others, exchanging my thoughts throughout democratic values.					
Principle 5. My reflections or insights come first, and then I interact with others. Consequently, I develop answers using my knowledge and interactions.					
Principle 6. I learn as a contextual process. It means I connect my life, my thoughts, my reflection, my prejudices and fears. I cannot divorce nay of them.					
Principle 7. My thoughts are based on previous thoughts. Consequently I construct a new thought. "The more we know, the more we can learn" (Heins, 2000).					
Principle 8. I revisit new concepts to enhance my understanding. As a result, I repeat exposure to knowledge and thought to increase my learning effectively by making insights.					
Principle 9. My motivation for new knowledge helps me to find facts about my life, thoughts and reality.					