Social Constructivism Expanded: A Personal Theory of Online Learning

Matt Crosslin

University of North Texas

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How do people learn? For those of us in the field of education, this is a foundational question that we all must wrestle with. When we are being honest about the question, we probably would confess that we know less about what makes the human brain work than we like to admit. However, we will never know the answer unless we explore and learn, so the search for answers must start somewhere.

For me, the place that I start is typically referred to as social constructivism. This paper will touch on the specifics of that field in the next section. I do not deny that there is a need to use other theories and epistemologies at different times in education. I am fairly pragmatic when it comes to the actual design of education, but I feel that the use of other epistemologies should lead to social constructivism. Ultimately, effective learning starts with a good design, and all epistemological choices should serve the end goal of good design. To this end, there are several other concepts, ontologies, and methodologies that I feel inform and enhance social constructivism.

For example, communication is the heart of how we socially construct knowledge. Therefore, learning theory should contain a strong theory of communication, such as Learning and Teaching as Communicative Actions (LTCA) theory. Also, social construction happens in specific cultures that can also create specific sub-cultures as construction happens, so Sociocultural Theory is also a large component of my theory. Another concept that I use to frame my theory is Heutagogy, a newer theory that is seen as the next step beyond pedagogy and andragogy. Finally, I try to wrap my ideas in a web of metamodernism, a pragmatic metanarrative that combines the best of modernism and post-modernism. All of these concepts will be expanded and explained in the next section of this paper.

Literature Review

The core idea that forms the basis for my personal theory of learning is social constructivism. As a theory, social constructivism has strengths and weaknesses like any other theory. Therefore, I feel that there is room for other epistemologies to exist concurrently in education. However, social constructivism does form the basic foundation that I usually tend to return to when designing. Social constructivism, of course, has its roots in constructivism, and that is where this review will begin.

Duffy and Jonassen (1992) describe the main idea behind constructivism as one where "meaning is imposed on the world by us, rather than existing in the world independently of us" (p. 3). This idea poses many unique challenges for education. As Duffy and Jonassen continue to explain, the meaning that learners place on an idea or a concept would be rooted in their experience. This experience has to be examined to understand what learning has occurred. Unfortunately, this leads to uncertainty over whether a learner actually understands a point being made or a concept being examined. Social constructivism provides a possible solution for this conundrum, based on the idea that "emphasizes the importance of culture and context in understanding what occurs in society and constructing knowledge based on this understanding" (Kim, 2001, p. 2).

Stacey (2002) expands upon this social constructivist idea by pointing out that "learning is interactive with a need for social interaction so that the learner can explain understandings and receive feedback, to clarify meaning and reach a group consensus" (p. 2). Social constructivism is a branch of constructivism typically attributed to the work of Lev Vygotsky, who was attempting to promote socialism as a way to improve his home country of Russia (Liu & Chen,

2010). However, despite this socialist bias, Vygotsky still had a place for the individual in his view of the learning process. Liu & Chen (2010) explain how by pointed out that

> Constructivism is a theory about how we learn and the thinking process, rather than about how a student can memorize and recite a quantity of information…. Learners construct meaning from reality but not passively receive what are taught in their learning environment…. Constructivism means that learning involves constructing, creating, inventing, and developing one's own knowledge and meaning. (p. 65)

This learning environment was not always a classroom, however, as Mahn (1999) highlights by pointed out that "Vygotsky located the origin of consciousness at the intersection of the intertwined and reciprocal development of language, tool use, society, and culture" (p. 343). Vaisey (2006) also backs up this larger context by examined the connection between culture and community, especially by looking at how culture shapes a sense of belonging to community.

Sometimes the difference between constructivism, social constructivism, and newer concepts like connectivism are a bit blurred, especially in the research to be examined next. Connectivism is "the integration of principles explored by chaos, network, and complexity and self-organization theories" (Siemens, 2005). Some researchers have debated whether connectivism is a distinct learning paradigm or really just a mixture of other learning paradigms like constructivism (Bell, 2011; Calvani, 2009; Kop & Hill, 2008). Siemens (2014) himself has acknowledged that connectivism is still incomplete. However, this incompleteness is not a problem, because "if it's complete, we can stop working on it" (Siemens, 204, para. 2). Siemens then makes his case for considering connectivism a theory by writing:

> The defining attribute of connectivism as a theory is that it can explain learning at the biological, conceptual, and interaction level using the same language throughout.

> Learning biologically is about connection forming. At the conceptual level of knowledge development, it is about connecting and bringing concepts in relation to others. At the physical and external level, it is about social and technological interactions and connections. The connections in the brain and around concepts and around social/technological networks share similar attributes (hubs, tie strength, clustering, etc). While we don't yet know what that means at a biological/neuronal level, it is clear that these attributes influence how we connect to others, use technology, and develop knowledge. (Siemens, 2014, para. 3)

Since Kop and Hill (2008) point out some strong overlaps between connectivism and social constructivism, and also since most classroom learning is social in nature, even research designs that examine constructivism and connectivism often cover social constructivist theories, and vice versa.

With this in mind, several studies have found positive results from implementing social constructivist or connectivist designs. Neo and Neo (2009) found that students that worked in groups in a constructivist-based multimedia lesson design reported positive feedback in regards to factors such as satisfaction, motivation, and understanding. Ruey (2010) found that a social constructivist design helped adult learners learn how to support each other's learning, as well as how to become more self-directed learners. Kop (2011) points out that connectivism does not work unless certain factors are considered:

> the research showed that there are some other conditions that clearly encouraged people's involvement and engagement in learning in a connectivist learning environment, including the 'social presence' of the facilitators and of participants, which enhanced the

> ‘community’ forming and the sense of belonging that built confidence and stimulated active participation. (p. 34-35)

When reviewing several studies on social constructivism, Watson (2001) concluded that “a general framework of social constructivism can promote effective teaching in pupils of all ages and levels of ability and across the curriculum” (p. 146). Much of the research examined here seems to utilize similar words related to social interactions, creating culture, and fostering community. These connections would suggest the need for a concept that connections all of these ideas together beyond social constructivism or connectivism. Sociocultural Theory is one such concept that ties together various aspects of constructivism and connectivism.

Sociocultural Theory is another idea that is based on the writings of Lev Vygotsky (Mahn, 1999) that is similar to social constructivism. According to Mahn, sociocultural theory focuses on social interaction in a specific cultural or educational context that helps students move through the zone of proximal development. The zone of proximal development is another Vygotskian idea that is described as a crossable “gap” between what learners can achieve individually and what learners can achieve with the help of others through social interactions (Vygotsky, 1978).

In addition, sociocultural theory is often connected to constructivism in the research literature (Cobb, 1994; Edwards, 2005). O'loughlin (1992) suggests that educators should take

> a sociocultural approach to teaching and learning that takes seriously the notion that learning is situated in contexts, that students bring their own subjectivities and cultural perspectives to bear in constructing understanding, that issues of power exist in the classroom that need to be addressed, and that education into scientific ways of knowing requires understanding modes of classroom discourse and enabling students to negotiate

> these modes effectively so that they may master and critique scientific ways of knowing without, in the process, sacrificing their own personally and culturally constructed ways of knowing. (p. 791)

Therefore, in many ways, sociocultural theory can be seen as a conceptual framework to guide the connections that happen in social constructivist design.

Ontology, Epistemology, and Methodology

As touched on the literature review in many places, my personal theory of learning makes many specific assumptions about reality, human knowledge, and learning in general. Before I touch on the core of my theory, I need to explain the premises beneath the entire theory. These are assumptions that are constantly in flux as I learn and expand, so this section should be read as a current snapshot rather than ideas set in stone.

Ontologically, I believe that the meaning we attach to reality is primarily experienced through social interaction. This is not to say that a tree does not exist if we do not agree that it exists. This is to say that the meaning we attach to the object we refer to as a tree as far as its function, properties, meaning, etc. are experienced through social interaction. If we agree to call a tree a car, then that would become the name for it. This does not change the reality around us in an objective sense necessarily, but it could radically change the meaning we apply to objects. Going back to trees, at one time the function we attached to them was "fuel." As we began to realize that we need those trees to provide other substances such as paper, our definition changed to one of "base material." All of these socially constructed meanings vastly changed our concepts of trees as well as the way we interact with them (and take care of them as a limited resource).

Epistemologically, I believe that knowledge is also socially constructed. This goes beyond the definition that we place on objects such as trees and into how we know a tree is not just fuel but also a resource. We arrive at these definitions of reality not because they exist outside of us, but because we construct them together as human beings. This means that our social skills and our cultural influences will have an impact on the construction of knowledge.

Methodologically, while I believe that are many concepts that need to be transferred objectively in the beginning of knowledge acquisition, the main methodological goal is to form a culture around a concept or discipline and then construct new knowledge through communication, debate, and negotiation. I do not believe that learning is passive or that it is primarily shaped by outside influences. Social activities will help learners to create knowledge that is meaningful to them.

The Core of My Theory

As previously examined, in the grand scheme of learning theories, I usually find myself leaning the most towards social constructivism for online learning and learning in general. I have always felt that the literature supports the idea that learning occurs best when learners are interacting with other learners to create a shared meaning out of the chaos of the world. I do feel that there are times when empiricism/objectivism is needed, especially in determining when certain learning objectives have been accomplished. However, other situations dictate that learning should be relative to each learner and therefore leaning needs a student-centered approach. This dual focus probably puts me more in the pragmatist camp, with heavy emphasis on social constructivist/connectivist tendencies. However, since I believe that forming a shared culture as well as examining how your culture affects your learning, it may be more accurate to

say I am a sociocultural leaning pragmatist. This pragmatism informs the metanarrative that I currently follow: metamodernism.

So what is metamodernism and where did it come from? Vermeulen and Akker (2010) point out that there are those that feel post modernism died at some point in the last few decades. In looking at the various options for what would "replace" post modernism (for those that feel it is no more), I came across the term "metamodernism." The "meta-" prefix in this term is not the same one that is used in terms like "metadata;" it was taken from Plato's idea of metaxy – a swinging back and forth between opposite poles (Vermeulen & Akker, 2010). Metamodernism really mixes elements from modernism and postmodernism. As a way to view the world, it embraces truth and relativism, hope and doubt, or construction and deconstruction as needed in any situation, not as polar opposites that can never exist at the same time (Vermeulen & Akker, 2010). However, this pragmatic approach does not mean that I would not favor one side over the other in general, as I have stated how I do prefer the social constructivist side of epistemology. This preference is connected to the next part of my personal theory, one that looks at the cultural aspect of learning.

For learning to occur, I believe that you need to have a space for social interactions to occur in ways that allows for a shared group identity or culture and in a way that allows for individuals to bring their specific cultural influences to the table. This space allows individuals to search for truth in ways that can apply those truths in different ways relative to each individual learner. This structure would build a shared understanding of the issue at hand, leading to a shared definition of whatever new knowledge the group constructed together. This shared definition of knowledge is often difficult in an environment informed solely by pedagogy or

andgragogy. Pedagogy and andgragogy often focus on specific aspects of learning – formal or informal. Sociocultural learning would require a different outlook that can combine the two.

Heutagogy is one idea that I feel best combines informal and formal learning into an integrated epistemology. Therefore, I believe that learning should be designed in a heutagogical manner, which is a newer idea that focuses on teaching students *how* to learn rather than just focusing on *what* content to learn. Heutagogy embraces such as ideas as universal learning opportunities, non-linear learning processes, and true learner self-direction in addition to combining informal learning with formal learning (Blaschke, 2012; Hase & Kenyon, 2000). Many of these ideas fit in well with social constructivism. However, one of the most important ideas is still missing: communication.

LTCA theory builds a framework to bring all of these concepts together. According to Warren and Wakefield (2012), LCTA theory "underpins how teaching and learning are constructed" (p. 101), as well as governs “the transmission, reception, critique, and construction of communicated knowledge" (p. 101). Without effective communication, construction of knowledge would be difficult at best. Effective communication also builds the bridges that allows for social exchanges to occur. Learners cannot learn how to learn unless they are able to effectively communicate what they have learned. Wakefield, Warren, Rankin, Mills, and Gratch (2012) identify four forms of communicative actions present in LTCA theory:

- Normative communicative actions are those that communicate knowledge based on past experiences, such as statements in class instructions that lay out expectations for student activities.

- Strategic communicative actions are the most familiar educational communicative actions – these occur most often through lectures, textbooks, and other methods where specific reified knowledge is transferred to the learner.
- Constative communicative actions are debates, arguments, and discourses that allow learners to make claims and counterclaims. Constative communication is also where social constructivism connects with LTCA theory, as students come to agreement over constructed knowledge through these communicative actions
- Dramaturgical communicative actions are those that allow for expression. Learners can reflect or create artifacts that express the knowledge they have gained as well as who that knowledge makes them as a person.

Communicative actions are foundational to teaching and learning, therefore LTCA theory forms a framework for all communications within learning.

To bring all of these ideas together, I believe that learning design should first focus on what works best for the intended goal. A metamodernist approach would determine whether objectivism or constructivism would be the best route to take. Objectivism might be determined to be the correct design epistemology for certain concepts, but the goal would be to push the learner towards a goal of being able to socially construct knowledge through communicative actions around that idea or concept. Social constructivism becomes the epistemological goal for most learning in my personal learning theory. This would be supported by a heutagogical design that encourages students to learn how to learn about a specific topic in order to construct the knowledge with others. All of this would take place within a specific culture related to the topic or by creating a learning culture around the topic. I believe that this approach could have many

benefits and impacts on the fields of instructional design and distance learning, which I will examine in the next section.

Impact of My Theory

In many ways, social constructivism is already impacting learning. While many programs still use a more "passive transfer of external knowledge" approach, many have been taking on a more interactive constructivist approach. I predict that this will accelerate as more institutions start to grapple with the effects of increased Internet access. Do we really need to teach learners to memorize facts and regurgitate them on a test when they can just look them up on the Internet? Most educators would acknowledge that very few learners will remember many facts after the test is over, so would it be more effective to teach them how to learn about a topic and then how to construct knowledge within the culture of that topic? This would require a major paradigm shift in how online courses are designed.

The biggest barrier to online learning is often the design of the lessons themselves. Tools are typically neutral as far as effectiveness goes until they are used in a specific design. But if no thought is given to design at all, or a poor design is used, the tool itself can become a barrier. From my experience, three areas that feed poor design the most are lack of formal design knowledge, lack of research knowledge, and lack of knowledge of the proper use of tools. Formal design knowledge is the foundation for good design, while keeping up on the latest research builds on this foundation. Finally, choosing the proper tool for the desired design is the last step to accomplish before diving into good design. Social constructivism will be able to have an impact on the field of learning when it is accompanied by good design.

My personal journey through online education has definitely had an impact on my theory by creating certain biases and preferences. I have been fortunate enough to have been a learner in

both face to face and online environments, as well as an instructor in both face to face and online environments. I earned my master's degree completely online, with many of the courses being completely asynchronous. After a few years of working as an instructional designer, I decided that I probably should teach a few online courses to see design issues from that side of the fence. I contacted the University that I earned my Master's degree from and have been an adjunct professor in one or two online asynchronous courses per semester since then. I definitely enjoy online learning as both a student and an instructor. This gives me an extreme bias in that I feel asynchronous discussions, blogging, and group work is very effective and enjoyable. Of course, I recognize that other students and instructors do not see it this way. This often blinds me to approaches to learning such as hybrid instruction, since I enjoy asynchronous activities so much. I am also reluctant to set up synchronous communication options through Skype or Instant Messaging of some type, since I personally prefer written communication through email. I am trying to make myself realize that there are certain personality types that need this synchronous interaction. In spite of these biases, I am still firmly convinced that social interaction through communicative actions is the foundation for learning.

Circling back to the concept of social constructivism, another impact of this learning theory is that instructors will need to start developing lessons that teach learners how to learn about a specific topic. As I pointed out a little earlier, the need to teach students a large number of factoids is decreasing as learners gain the ability to look these factoids up online. But what do they do with these factoids? Few classes seem to be able to get into that. Every discipline has a slightly different method for learning existing knowledge and constructing new knowledge. History scholars investigate new discoveries by trying to translate archaic languages, while information technologists might create new code variations by combining existing standard

codes together. Also of the factoids involved in this process can be found online, but how do you find new research in historical archives versus new code combinations in code repositories? Each of these disciplines has a culture built around it for accessing existing knowledge as well as constructing new knowledge. The impact of my theory would be to cause a massive paradigm shift away from transmitting existing knowledge towards teaching learners how to find that knowledge and then construct new knowledge through communicative actions within the confines of the culture that surrounds that particular discipline.

Practice Learning Design

Practical learning design can often get lost in heavy discussions regarding theory. The most important issue to examine about my personal learning theory is: how does all of this work practically in a learning environment? As I stated earlier, I always start with learning design; and in learning design, you start with the end goal first. The end goal of my learning theory would be to produce a sociocultural learning situation guided by LTCA theory that teaches students how to be life-long learners about a given objective through communicative actions and social interaction. However, there may be other steps necessary to accomplish this goal.

Therefore, the first task now that the goal has been determined is figure out where to start. Many lessons will require some form of prior knowledge in order to have a beginning foundation. The instructor or designer will need to determine what this knowledge is, if learners are expected to already know it or not, and how they will be expected to learn this knowledge if they do not already know it. Many disciplines require learners to memorize facts – no one would want their doctor or mechanic to have to check with the internet every time they accomplish one part of a procedure. The key factor that the designer will need to determine is if the learner needs to *memorize* the facts, know *about* the facts, or know how to *find* the facts as needed. If the

learner needs to memorize facts, instructors may need to create a separate lesson based on many strategic communicative design methods that have proven to be effective in helping learners memorize facts.

At this point, whether strategic communicative actions have concluded or instructors have determined that learners have already acquired foundational knowledge, I would advise diverting from standard lesson design. While much can be communicated by strategic communications, I recommend that instructors allow students to learn how to find important information while working with others. This can be accomplished by connecting students to the sociocultural professional community surrounding the topic, or by even creating a sociocultural community within the course that serves as a simulation that closely matches a real-life professional community. Since many topics have more than one position, students can even be placed into groups to investigate all sides and then debate these sides through constative communicative discourse until they come to a socially agreed upon set of knowledge. The instructor would serve as more of a "learning guide" than a "knowledge dispenser," giving students just enough chaos to help them struggle and learn while still providing enough support through normative communicative actions or connections with other learners to support a hand-off over the zone of proximal development. This process would continue until students understand the concept and have arrived at a socially agreed upon set of knowledge.

This agreement would then be followed by a dramaturgical communicative action of some type that allows students to reflect upon and express their new knowledge. Students would write or create artifacts to communicate their application of the new knowledge to real world problems presented in class. I would encourage the instructors to allow students to determine the manner in which they communicate this knowledge, usually by providing an assignments bank

of some sort that allows students to choose the media they use that best fits with what they want to communicate dramaturgically (see Groom (n.d.) for an example of an assignments bank). Some subjects may not allow for much variation in media, but to the degree that flexibility is possible, instructors could allow student-led decisions in order to encourage true expressions of knowledge unhindered by stress over proper media techniques (i.e. properly formatted papers, detailed PowerPoint presentations, or correct interpretations of "application" questions on standardized tests).

Finally, I want to examine a practical example of my learning theory in the field of Geology. One controversial topic that needs to be covered in Geology is the age of the Earth and how Scientists arrived at the current estimates. Students often don't need to have these facts memorized since they are constantly being tweaked and updated by new discoveries and theories. However, the age of the Earth factors into everything from Science Fiction movies to religious debates, so familiarity with the various concepts and findings is important. Additionally, the ability to follow scientific thought in order to discern between scientific facts in literature and popular ideas in certain groups is also very important.

Therefore, instead of creating lessons heavy on strategic communicative actions designed to convey specific facts that might change slightly over the years, the instructor could focus on how to connect students with the sociocultural groups that investigate geologic claims, as well as on how to read through the various debates on the topic to discern between Science and personal opinion. The class could be broken into smaller groups to investigate the various historical views of the age of the Earth. This is a large body of knowledge that is often chaotic, so students will rely on normative communicative actions with each other and the instructor to work through some of this chaos. Furthermore, the instructor could structure the groups so that the class takes

on a sociocultural characteristics of a scientific conference looking through various papers to determine which ones need to be presented as Scientific and which ones need to be rejected. Each group can follow various scientists through Twitter accounts, blogs, and discussion forums to get the latest ideas from the specific theory their group is assigned to. This process would help students learn where to go for new scientific knowledge as well as how to engage with the social cultures surrounding the topic.

After sufficient time to gather their "report" as a group, the groups could come together to analyze their findings and determine which theories will be presented at the conference. This process of constative discourse could take the form of a roundtable, or a review board, or even a debate. The class would present points and counter points until a consensus is reached.

The final step of this design would be a dramaturgical project requiring students to reflect on the process and present a summary of the development of current scientific thought, how that development affects both scientific discourse and themselves as learners, and how they can continue to track with changes and new data that emerges surrounding the topic of the age of the Earth. Ideally, these dramaturgical reflections could be presented through writing a blog post, recording a video, creating an animation, drawing a comic book, creating a series of web pages with animated gifs, or any number of other creative media choices that the student would like to make. The idea would be to allow the student to prove that they understand the complexities of the topic as well as how to be a life-long learner in this topic.

I realize that this learning theory may not lead to a massive database of quantitative scores that prove that learning has occurred based on a long list of high numbers. However, it could possibly lead to a class full of self-directed learners that know how to intelligently engage with the debate surrounding a specific topic. Hopefully, our education system will change to

value deeper learning like this at some point.

Conclusion

In conclusion, I realize that there are no perfect learning theories. The theories that I pick are the ones that I feel are most effective. My personal theory is that learning happens due to effective communication in sociocultural situations that allow for students to construct new knowledge together, with the goal of learning *how* to learn about a topic being more important than learning specific facts. This process is one that will probably look messy and chaotic at times, but in my opinion learning was never meant to be quiet and calm. Learning is really a process of creating something new, and the field of art has taught us that creation is rarely a neat, clean process. Therefore, my focus will always be on embracing the chaos of life as a continuing process of making sense out of the world around us.

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