

Sociocultural Theory as an Advanced Instructional Design Method:
Examining the Application, Possibilities, and Limitations

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Sociocultural Theory is one of many theoretical learning models that are based on the work of Lev Vygotsky. The following sections will describe the various research and literature sources that explain and support this particular theory. Sociocultural Theory was chosen for this project because it is different than the average instructional design processes that are found in many educational settings. Anyone that has been in a classroom setting has probably noticed that current educational design methods rely heavily on individualistic, isolated strands of topics that rarely connect to each other (at least, on purpose) or that fail to take advantage of the abundant cultural connections that exist in many educational settings. Sociocultural Theory not only acknowledges the learning networks that learners are already a part of, but also embraces these connections as part of the learning design process. Stereotypical lesson design does occasionally take advantage of pre-existing learning connections, but at best will have learners merely tap into their networks and bring back something individually that they will then work on individually to be graded individually. Advanced instructional design methods such as Sociocultural Theory are one possible method to help educators move beyond this individualistic system.

Advanced Instructional Design

But does Sociocultural Theory count as advanced instructional design or basic instructional design? The problem with this question is that there really is no one agreed upon definition for what would differentiate “advanced” instructional design from “basic” instructional design. Reigeluth (1999) makes a distinction between basic instructional methods (those that “have been scientifically proven to consistently increase the probability of learning under given situations” (p. 20)) and variable instructional methods (those that allow for

“alternatives from which you can choose, as vehicles for the basic methods” (p. 20)). Reigeluth then continues on to make an argument for a new instructional design method that moves beyond the basic methods to those that employ such methods as self-direction, team work, authentic tasks, diversity of sound methods, and perseverance (1999, p. 20). This argument hints at a difference between basic and advanced instructional design, but does not fully make that exact distinction.

Elsewhere, Moleda, Reigeluth, and Nelson (2005), describe the ADDIE method (an acronym for Analyze, Design, Develop, Implement, and Evaluate – the basic steps of the ADDIE design process) as the basis for most instructional design models, and even go further to characterize it as a systematic approach that uses the output from one step to inform the decisions on the next. In the final stage of ADDIE (Evaluation), Moleda, Reigeluth, and Nelson (2005) note that “the learners are assessed in order to determine the extent to which they mastered the objectives specified at the beginning” (p. 576). This would appear to indicate that the ADDIE method produces what is described as the “basic” instructional methods that Reigeluth (1999) earlier described. Therefore, for the purposes of this paper, an advanced instructional design method is one that goes beyond ADDIE to produce learning that requires any combination of self-direction, team work, authentic tasks, diversity of sound methods, and perseverance from learners. Also, an advanced instructional design method would go beyond the empiricism of ADDIE that seeks to tie learning with measurable objectives and embrace other paradigms such as constructivism, connectivism, relativism, or any other non-empirical paradigm.

With this definition in mind, attention will now be turned to examining Sociocultural Theory as a possible advanced instructional design method. Teemant (2005) describes Sociocultural Theory as a theory that:

Rests on the premise that learning is social, and that it is through social interaction with teachers and peers who are more knowledgeable than students receive assistance as needed in their Zone of Proximal Development (ZPD) to engage in culturally meaningful tasks. (p. 49)

Therefore, Sociocultural Theory would be advanced because it produces teaching that requires teamwork, authentic tasks, and diversity of sound methods. The element of social interaction present in Sociocultural Theory would also place it in line with non-empirical paradigms such as constructivism and connectivism (and possibly even relativism depending on how a lesson is designed). One could also argue that if the lesson is designed to be self-directed (which is a possibility in Sociocultural Theory), that it would also require perseverance from the learner to complete. This differs from the typical product of ADDIE design in that ADDIE based design contains an organized, logical method for creating and evaluating instructional design. In order to have something to evaluate, a designer needs something that is possible to analyze. There will need to be right and wrong answers for everything, with student work being compared with these answers. This leads to closed questions that can easily be plugged into formulas to see if “success” was achieved. Certainly, this does not have to be the case when designing lessons within ADDIE, but like breeds like and most likely if an empirical design path is taken (like ADDIE), the end product will also be empirically-focused.

This is not to say that courses designed with ADDIE are “bad” or “wrong” in any way. One should not make the assumption that “advanced” means “better.” Basic is still necessary in many instances. Just like in cooking, there are basic and advanced classes. This does not mean that the food one learns to cook in a basic class is not good to eat or that it is less important than food one learns to cook in the advanced course; it just has a different purpose in an individual’s

diet. Likewise, advanced instructional design is not better than basic, it is just meant to meet different educational needs.

Certainly it would be possible to create rubrics, rating systems, and other methods for assigning numbers to the assessment of courses designed with Sociocultural Theory, but those grades would still have some degree of subjectivity and therefore would lack the objectivity needed to make them purely empirical. This, of course, would make it difficult to label a course as a “success” outside of positive feedback from students. But this would also lend support to classifying Sociocultural Theory as “advanced” – the greater the difficulty in determining the extent to which learners have mastered the objectives that were specified at the beginning of the course could be seen as one indication of advanced design as defined for this paper.

Another view of “advanced” instructional design is that it could be design that advances the field into new areas. Dosunmu (2013) has stated that “Sociocultural Theory has also been called upon to advance instructional practice that might redress disparities in the current educational system” (p. 16). If our current education system contains a large amount of instruction designed based on the ADDIE model (Moleda, Reigeluth, & Nelson, 2005), then a model that is being called upon to advance beyond current practices might also be said to be an advanced model.

Literature on the Sociocultural Theoretical Model and Practices of Designing Instruction

Dosunmu (2013) also provides a definition of Sociocultural Theory that is complimentary to that of Teemant (2005):

The work of Sociocultural Theory is to explain how individual mental functioning is related to cultural, institutional, and historical context; hence, the focus of the

sociocultural perspective is on the roles that participation in social interactions and culturally organized activities play in influencing psychological development. (p. 15)

This would mean that the sociocultural theorist believes that learning occurs through interaction, negotiation, and collaboration (Dosunmu, 2013; Rezaee, 2011). Students would be introduced to the practices of a community that they are to learn from, and then “engage in the activities, talk, and use of tools in a manner that is consistent” with that community (Dosunmu 2013, p. 16).

One of the key concepts for how this communal learning occurs is the Zone of Proximal Development. Vygotsky (1978) stated that this zone is the “distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers” (p. 85). When compared with individual accomplishment, this zone was seen as a better indicator of cognitive development. This concept has been expanded upon to include other concepts (negotiation, collaboration, etc) as already examined. But the underlying core idea is that learning is more of a process that is constructed among participants as they solve problems rather than a product of direct instruction (Eun, 2010).

Sociocultural Theory Research

If Sociocultural Theory is to be labeled as “advanced” instructional design based on the ideas of Reigeluth (1999) and Moleda, Reigeluth, and Nelson (2005), then what does the research have to say about the diversity of sound methods in Sociocultural Theory? Teemant (2005) identified a diversity of methods related to Sociocultural Theory: social interaction, more knowledgeable others, Zone of Proximal Development, and culturally meaningful tasks. So the question remains: are these methods sound based on the research?

Teemant (2005) studied the effects of teaching future teachers of English as a Second Language how to use Sociocultural Theory by modeling it in their distance education courses.

Teemant (2005) conclude that:

The findings of this study provide evidence that a distance teacher education program can be designed to teach and model socio-cultural perspectives and yield reflective participants who have increased knowledge, skills, and dispositions to innovate in their own teaching for the benefit of students who are learning English as a second language. (p. 61)

The courses in this study were designed to “include social interaction, high levels of assistance, and performance in multiple and culturally meaningful contexts and tasks” (Teemant, 2005, p. 51).

Research into Sociocultural Theory is also showing that an individual’s cultural background may have an effect on how they perform in group-oriented tasks. Shi, Frederiksen, and Muis (2011) found that students from a culture that values protecting individual goals might bring that attitude into a collaborative effort, unless they are given a task that requires them to meet the expectations of the group. Overall, they reported finding results that are consistent with sociocultural perspectives, but the results also indicate that how the learning tasks are designed might have a significant bearing on the success of a collaborative effort.

Additionally, Tapanes, Smith, and White (2009) found that cultural norms affect learning in online education. Students from a more individualistic culture were found to prefer an individualist style of education, while those from a collectivist culture felt that the lessons did not reflect their culture very well. Tapanes, Smith, and White (2009) found that “informing beforehand about relevant cultural differences that might be encountered during the online

course should help the student and the instructor become multiculturally competent and successful” (p. 32). This falls in line with Sociocultural Theory as well as indicating areas where an individual student might find frustration with the design of collaborative work. Other social and cultural factors have also been found to affect online learning, such as the power distance index (which Wang (2007) describes as “the degree to which a learner’s response to another individual in a learning setting is inhibited or otherwise negatively altered when the other individual holds a position that is superior or inferior to the learner’s own position” (p. 294)), group interactions (Kanuka, 2011), and other forms of interactions such as student to student, student to teacher, and student to content (Abrami, Bernard, Bures, Borokhovski, and Tamim, 2006).

Finally, Sociocultural Theory has been researched in emerging technology fields as well. Peterson (2012) examined learner interaction in massively multiplayer online role playing games from a sociocultural context. His findings indicated that students in his study generally had a positive view of the sociocultural aspects of the game, and that those aspects may have even had a part in helping learners become more comfortable with the challenging tasks. There were several limitations to this study (including sample size and lack of quantitative data), but the overall idea is that Sociocultural Theory is having a noticeable effect on new technologies as well as traditional classrooms. As technology evolves and cultures change, diverge, and merge, more research will be needed to know the effects of these changes on education from a Sociocultural perspective. However, many of the results so far have been positive when a well-designed Sociocultural lesson is examined.

Strengths and Weaknesses of Sociocultural Theory

Sociocultural Theory is one of many theories that explain learning. Learning is a very

complex process, so no one theory will probably ever be accepted as the only correct theory of learning across the board. But Sociocultural Theory is a very wide ranging theory that touches on a good portion of what is known of learning – which is probably one of its greatest strengths as well as one of its greatest weaknesses. When such a large view of two of the major components of learning is taken – social interactions and cultural effects – research is bound to touch on a large number of issues that will affect many learners. But researchers could also quite possibly miss many important details in all of the massive amounts of data that could be collected. At some point every single cultural difference in every group can't be accounted for, so researchers will be forced to draw lines and leave some issues out.

Another strength of Sociocultural Theory is that it can be applied to the systems that are already in place in most educational settings. Social and cultural groups already exist in most schools – whether these groups are called “classes,” cohorts,” “grades,” “ISDs,” or any other classification. So many pre-defined social groupings that could take advantage of Sociocultural Theory already exist. The weakness that accompanies this strength in many settings is that often these social groupings are set in their ways and not willing to change. Individualistic educational settings tend to want to stay individualistic. Where individualistic educational settings have been the norm for decades, Sociocultural Theory could quite possibly end up causing more confusion if it is thrust upon unsuspecting students and educators without warning.

Additionally, assessment is another area that can be seen as a great strength and a great weakness for Sociocultural Theory. While Sociocultural Theory is not required to produce group work or qualitative results, much of the literature reviewed for this article focuses on those aspects. Group work can sometimes be difficult to assess – especially in a society that values individual success on individual standardized tests. Concepts like cheating and plagiarism might

have to be adjusted or completely re-conceptualized for a social context. On the other hand, those educators that would like to see assessment focused more on processes, rubrics, and portfolios might find the structure of Sociocultural Theory more suited for their needs.

Also, much of the research on Sociocultural Theory seems to focus on the components of the theory (more knowledgeable others, social learning, cultural considerations, etc.) rather than the application of the theory itself as a whole to educational contexts. Case studies seem to be the main mode of examining the theory (see Sawyer (2012) for an example), but most of these focus on how Sociocultural Theory explains the situations and not if the situation supports Sociocultural Theory itself. More research is needed into the theory overall in a comprehensive manner to see if the complete package works as well as the individual components.

But as the literature reviewed for this paper indicates, there is some evidence that at least part if not all of Sociocultural Theory is beneficial for education. This points to another strength of Sociocultural Theory – it can be adjusted and used partially, or as a whole theory. The parts are often found to work as well as the whole. As a theory, Sociocultural Theory is built on examining a situation for its social and cultural context to determine how to best teach learners. If that examination finds that only one part of the theory will work, then that part can be used by itself.

Finally, many Sociocultural Theory practitioners tend to focus on socialization and interaction in learning. Not all learning can or should happen in groups. There are times when individuals should learn on their own in a context that is not cultural to them at all. This is part of becoming a flexible, well-rounded learner. In those instances, Sociocultural Theory would not really be useful for the design of the lesson. It might possibly help the learner understand how to adjust to the lesson, but that is a subject that is outside of the scope of this paper.

Conclusion

This paper has looked at how some researchers have called upon Sociocultural Theory to advance instructional design. There are certainly many aspects of Sociocultural Theory that make it an attractive option for transforming education. However, Sociocultural Theory would be more appropriately viewed as one tool that can be used to transform education rather than *the* one major savior of education. As education becomes more diverse and social in nature, there is a distinct possibility that interest and research into sociocultural theory will increase. This increased focus will possibly bring about various diverse schools of thought within Sociocultural Theory. The literature is already showing a diversity of areas – cultural effects on education, social learning, collaborative work, etc. – that all fall under the umbrella of Sociocultural Theory. So, ultimately, Sociocultural Theory may become a broader description of an entire suite of concepts that guide instructional design rather than just one advanced theory of instructional design.

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