<Collaboration>

1 What is it?
Collaboration is generally considered as people working together with shared interests for a common goal. As a dialogic strategy grounded in constructivist epistemology, learners are paired or grouped together to interact in an activity or complete a task where new group knowledge is created from their interaction. As stated by Sarah Hsueh-Jui Liu, & Yu-Ju, L. (2016) “Initially, collaboration denotes the concept “social constructivism” (Vygotsky, 1978), collaborative interaction between interlocutors to create meaning in a dialogue as a goal-directed activity between a speaker and a hearer (Lantolf & Pavlenko, 1995)” (p. 172). According to Chu, S. K., & Kennedy, D. M. (2011) “As a learning strategy it emphasises social and intellectual interaction in the learning process such that the differences in knowledge, skills, and attitudes among collaborators become strengths rather than weaknesses” (p. 582). Hence collaboration as a learning strategy also has ties with the properties of social negotiation. Dabbagh, N., & Bannan-Ritland, B. (2005) promote collaboration together with social negotiation and highlight “As Duffy and Cunningham (1996) stated, In collaboration and social negotiation the goal is to share different viewpoints and ideas and to collaborate on problem-solving and knowledge building activities. Groups are formed to provide variation in classroom activity (face-to-face or virtual), share work-loads (permitting larger projects), and promote peer tutoring. (p. 187)” (p. 217). Strategic collaboration is used by several pedagogical models including, problem based learning (PBL), cognitive apprenticeships and situated learning.

2 How does it work?
Collaboration as a strategy works best when students are allowed to communicate openly in a socially responsible manner within a group or team setting so that their knowledge input combines with others to advance group knowledge in a task or activity. The role of the instructor is as a facilitator of the collective interactive conversation. Collaboration as a strategy relies on the construction of knowledge through dialogic interactions. As the facilitator, the instructor must ensure that dialogue is taking place and is not stifled. Donato, R. (2004) brings attention to a study where “the teacher created a hierarchical classroom organization by assuming the dominant role of purveyor of cultural information. In this way, he inhibited collaboration and prevented the creation of a relational identity established by the students” (p. 295). Donato, R. (2004) further states “Sociocultural theory maintains that learning and development emerge and are shaped by the social, cultural, and historical contexts in which individuals engage in meaningful and purposeful joint activity” (p. 295). The activities must generate knowledge from the collective group and not from a top down structure. Collaborative learning interactions can take place in a classroom or online. Collaborative learning technologies which assist in facilitating the collaboration may take place in an online or internal network format. Collaboration tools such as a MuTable are accessible in the classroom as well as access Wiki or Google Docs. Some other dialogic strategies which assist collaboration and social negotiation are shared activities which promote articulation, multiple perspectives, and reflection.

3 Who is doing it?
Instructors acting as facilitators recognize a need in K-12, and in university classroom settings to promote collaboration as a strategy for learning. Many school systems are turning to technologies to drive collaboration. Focus internet and communications technologies (ICT) are becoming more mainstream in classrooms. Environments of computer supported collaborative learning (CSCL) in the classroom are being used and studied with varying results. According to Mostmans, L., Vleugels, C., & Bannier, S. (2012) “While a number of studies on the cognitive aspects of collaboration find that students working in CSCL environments report higher levels of learning, make higher quality decisions, deliver more complete reports, participate more equally, and engage in more complex, broader, and challenging discussions than students working face-to-face, other research finds that students working in CSCL environments sometimes perceive their discussions as more confusing, less productive and needing more time to reach consensus and make decisions than students working face-to-face” (p.105). In a university setting, research on case studies has shed light on better use of collaborative strategies. According to Dabbagh, N., & Dass, S. (2013) “For designing case studies: (d) case problems for CFH and GBS were perceived as promoting more tacit and individually driven cognitive processes and problem solving activities while case problems for LBD, PBL, and SL were perceived as promoting more explicit, overt, and collaborative problem solving activities” (p. 172). Based on web based EFL learning research highlighted by Sarah Hsueh-Jui Liu, & Yu-Ju, L. (2016) “Among many other benefits, students will be more capable of thinking critically if they work collaboratively rather than working individually” (p. 181).

4 How effective is it?
Collaboration as a strategy is effective when used correctly. While there are many studies which point out the theoretical
benefits of a collaborative strategy for cognitive growth and construction of knowledge; other studies have pointed out criteria which should be considered when deciding on collaboration as a strategy. Studies show that collaboration strategies are beneficial to improving learning, problem solving skills, critical thinking skills and enhanced knowledge transfer. As stated by Donato, R. (2004) “higher forms of thinking, derivative of mediated collaborations, may deal with strategic orientations to tasks (e.g., learning strategies, establishing procedures for carrying out an information-gap task), conceptions of self and community (e.g., relational identities), or generalizations of semiotic systems (e.g., problem-solving algorithms or grammar). Since all forms of mediation are developed in a context, they are themselves inherently social, cultural, and historical” (p. 297). As referenced earlier in the example of an instructor not leading classroom discussion as facilitator, there is evidence to negative aspects as well to hierarchical case study representation. According to Dabbagh, N., & Dass, S. (2013) “Results revealed that team-based solutions of the heterarchical case problem representation were significantly more cogent and convincing than team-based solutions of the hierarchical case problem representation. Additionally, team-based solutions of the heterarchical representation of the ill-structured case problem provided evidence of a heuristic problem-solving process that facilitated the identification of an expert-like solution to the case problem and the articulation of students’ understanding and application of grounded and engaging instructional designs” (p. 162).

5 What are the implications for instructional design?

The implications of collaborative strategy for instructional design are that higher level thinking and social negotiation skills are developed through collaborative strategies. Strategic collaboration is used by several pedagogical models including, problem based learning (PBL), cognitive apprenticeships and situated learning. The best supported learning outcomes supported by this strategy are those for problem solving when there is an ill-structured problem and a final answer to be derived. The learning technologies most appropriate to facilitate the implementation of this strategy are GoogleDocs and WikiPedia. Both are studied in these article and more. Multi-touch table tops have also been studied to improve interaction not only in mainstream classrooms, though also for students who have increased difficulty with social negotiation and collaborative skills as stated in this article about children with autism. The type of learning problems that it is best used for is to create knowledge and cognitive skills in students and academic researchers and attempt to go beyond individual understanding.

Scenario

A real world authentic scenario that could be addressed by this strategy would be that of a 5th grade classroom assignment. Even in the most technical school settings there is still a huge learning curve in accepting and proper use of technology to facilitate learning. Students in groups of 3 are required to access a school computer to research information about History of the American Southwest, then present their findings in a poster format. The current strategy consists of the first student looking online to find information and reading it out loud to a second student who transcribes the information. The third student is primarily responsible for selecting the color scheme for decorating the poster. In this actual scenario, the first student is visually searching, analyzing and verbally communicating the information to the second student. The second student is interacting with the first student through the auditory processing of information, kinesthetically writing it down, and reviewing the writing both visually and verbally with the first student ensure the content is accurate. This scenario has not taken into consideration proper planning or scaffolding of a collaborative effort and resembles more of a dysfunctional group project at best. A planned collaborative strategy for this exercise could involve the teacher identifying specific research tasks for the student to search on the computer, and provide an example of the topics divided into three so that the student could take ownership of a topic they identify with by taking turns as the research expert on the computer. They would each be responsible for reporting that information to the other two students who would lead the research discussion on what information may be important to include in the poster design. When coming to a consensus of the information to be derived from the topic, the next student would drive the research at the computer for their topic and so forth until all students had the opportunity to lead a topic search and discussion. The discussion is to stimulate questions for additional research and knowledge building about a specific topic that drives cognitive thinking. Introducing an ill structured format or leading the students is a good way to promote student interactions. Teachers can further scaffold by communicating which information should be on the poster and providing a sample.
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Bibliography:


