Chapter 1 : Constructivist Learning Groups â€" School Reform Initiative

Protocols are most powerful and effective when used within an ongoing professional learning community and facilitated by a skilled facilitator. To learn more about professional learning communities and seminars for facilitation, please visit the School Reform Initiative website at theinnatdunvilla.com

The theory has two basic kinds of learning: Instrumental learning focuses on learning through task-oriented problem solving and determination of cause and effect relationships. Communicative learning involves how individuals communicate their feelings, needs and desires Meaning structures perspectives and schemes are a major component of the theory. They are divided into 3 sets of codes: Meaning structures are understood and developed through reflection. Through this reflection we are able to understand ourselves more and then understand our learning better. Merizow also proposed that there are four ways of learning. Application Transformative Learning theory is focused on adult learning, particularly in the context of post-secondary education e. Example Applying transformative theory to curriculum evaluation, one looks for evidence of critical reflection in terms of content, process and premise. Content reflection consists of curricular mapping from student and faculty perspectives; process reflection focuses on best practices, literature-based indicators and self-efficacy measures; premise reflection would consider both content and process reflection to develop recommendations. Principles Adult exhibit two kinds of learning: Change to meaning structures occurs through reflection about content, process or premises. Personal Transformation in Small Groups. Transformative Dimensions of Adult Learning. San Francisco , CA: Critical Perspectives on a Theory in Progress. Understanding and Promoting Transformative Learning: A Guide for Educators of Adults. Transformative Learning in Action: Journal of Nursing Education, 40 7. Educational technology professional development as transformative learning opportunities. An update of transformative learning theory: International Journal of Lifelong Education , 26 2 ,

Chapter 2 : Constructivist Theories - BEP Network - Our Google Site

Title: Constructivist Learning Groups: Attribution: Developed in the field by educators. Description: To analyze different aspects of a problem or issue; to come to consensus on difficult questions.

Problem multiple cases and projects integrated at the curriculum level Jonassen recommends making the learning goals engaging and relevant but not overly structured. In CLEs, learning is driven by the problem to be solved; students learn content and theory in order to solve the problem. This is different from traditional objectivist teaching where the theory would be presented first and problems would be used afterwards to practice theory. Instructors also need to provide an authentic context for tasks, plus information resources, cognitive tools, and collaborative tools. In this style, it is important for the student to produce the correct answers. However, in constructivist teaching, the process of gaining knowledge is viewed as being just as important as the product. The teacher presents students with a "focus" question and allows an open discussion on the topic. This technique can be used throughout the course of study for a particular topic, but is also a good assessment technique as it shows the teacher the progress of the student throughout the course of study. In this activity, students list and categorize the concepts and ideas relating to a topic. These encourage students to manipulate their environments or a particular learning tool. Teachers can use a checklist and observation to assess student success with the particular material. This allows a teacher to determine what knowledge students bring to a new topic and thus will be helpful in directing the course of study. There are various forms of this lesson, but all are developed from the Christmas lectures Faraday gave on the functioning of candles. In open constructivist lessons using these lectures as a basis, students are encouraged to discover for themselves how candles work. They do this first by making simple observations, from which they later build ideas and hypotheses which they then go on to test. The teacher acts to encourage this learning. If successful, students can use this lesson to understand the components of combustion, an important chemistry topic. As humans develop, there are qualitative changes in their ability to think logically about experiences, but the processes by which learning occurs, cognitive adaptation and social mediation , are believed to be continuous or remain the same throughout the life. Learning environments for adults based on constructivist philosophy include opportunities for students to make meaningful connections between new material and previous experience, through discovery. One of the simplest ways to do this is asking open-ended questions. Open-ended questions such as "Tell me about a time when Student responses to such questions are opportunities for experiencing the perspectives of others. For these questions to be effective it is critical that instructors focus on teaching content that is useful for participants. The importance of using these types of strategies with adults contributes to what [9] Bain p. Learning contracts, group projects, role play, case studies, and simulations are classroom methods associated with transformative education. Teachers will find that since the students build upon already existing knowledge, when they are called upon to retrieve the new information, they may make errors. It is known as reconstruction error when we fill in the gaps of our understanding with logical, though incorrect, thoughts. Teachers need to catch and try to correct these errors, though it is inevitable that some reconstruction error will continue to occur because of our innate retrieval limitations. I wonder why the water does not spill over the edge of the full cup? For example, promotion of literacy is accomplished by integrating the need to read and write throughout individual activities within print-rich classrooms. The teacher, after reading a story, encourages the students to write or draw stories of their own, or by having the students reenact a story that they may know well, both activities encourage the students to conceive themselves as reader and writers. Arguments against constructivist teaching techniques[edit] Main article: Constructivism learning theory Critics have voiced the following arguments against constructivist based teaching instruction: A group of cognitive scientists has also questioned the central claims of constructivism, saying that they are either misleading or contradict known findings. Supporters counter that "Students do not reinvent the wheel but, rather, attempt to understand how it turns, how it functions. In developing this instruction these educators produce materials that require learning to be behaviorally active and not be "cognitively active". Mayer recommends using guided discovery, a mix of direct instruction and hands-on activity, rather than pure

discovery: Specifically, they say instructors often design unguided instruction that relies on the learner to "discover or construct essential information for themselves" Kirchner et al. Finally Kirschner, Sweller, and Clark cite Mayer [11] to conclude fifty years of empirical results do not support unguided instruction.

Chapter 3 : Constructivism (philosophy of education) - Wikipedia

committed to a constructivist philosophy construct teaching and learning. The study is a collaborative project between the University of South Australia, The Open.

Individual[edit] The formalization of constructivism from a within-the-human perspective is generally attributed to Jean Piaget, who articulated mechanisms by which information from the environment and ideas from the individual interact and result in internalized structures developed by learners. He identified processes of assimilation and accommodation that are key in this interaction as individuals construct new knowledge from their experiences. When individuals assimilate new information, they incorporate it into an already existing framework without changing that framework. Accommodation can be understood as the mechanism by which failure leads to learning: It is important to note that constructivism is not a particular pedagogy. In fact, constructivism is a theory describing how learning happens, regardless of whether learners are using their experiences to understand a lecture or following the instructions for building a model airplane. In both cases, the theory of constructivism suggests that learners construct knowledge out of their experiences. However, constructivism is often associated with pedagogic approaches that promote active learning , or learning by doing. There are many critics of "learning by doing" a. Without the social interaction with other more knowledgeable people, it is impossible to acquire social meaning of important symbol systems and learn how to utilize them. Young children develop their thinking abilities by interacting with other children, adults and the physical world. From the social constructivist viewpoint, it is thus important to take into account the background and culture of the learner throughout the learning process, as this background also helps to shape the knowledge and truth that the learner creates, discovers and attains in the learning process. Social constructivism thus emphasizes the importance of the learner being actively involved in the learning process, unlike previous educational viewpoints where the responsibility rested with the instructor to teach and where the learner played a passive, receptive role. Von Glasersfeld emphasized that learners construct their own understanding and that they do not simply mirror and reflect what they read. Learners look for meaning and will try to find regularity and order in the events of the world even in the absence of full or complete information. This is also named after the Harkness table and involves students seated in a circle, motivating and controlling their own discussion. The teacher acts as little as possible. The students get it rolling, direct it, and focus it. They act as a team, cooperatively, to make it work. They all participate, but not in a competitive way. Rather, they all share in the responsibility and the goals, much as any members share in any team sport. Discussion skills are important. Everyone must be aware of how to get this discussion rolling and keep it rolling and interesting. Just as in any sport, a number of skills are necessary to work on and use at appropriate times. Everyone is expected to contribute by using these skills. The motivation for learning[edit] Another crucial assumption regarding the nature of the learner concerns the level and source of motivation for learning. By experiencing the successful completion of challenging tasks, learners gain confidence and motivation to embark on more complex challenges. In the former scenario the learner plays a passive role and in the latter scenario the learner plays an active role in the learning process. The emphasis thus turns away from the instructor and the content, and towards the learner. The critical goal is to support the learner in becoming an effective thinker. This can be achieved by assuming multiple roles, such as consultant and coach. A few strategies for cooperative learning include Reciprocal Questioning: Kukla argues that reality is constructed by our own activities and that people, together as members of a society, invent the properties of the world. Other constructivist scholars agree with this and emphasize that individuals make meanings through the interactions with each other and with the environment they live in. Knowledge is thus a product of humans and is socially and culturally constructed. He further states that learning is not a process that only takes place inside our minds, nor is it a passive development of our behaviors that is shaped by external forces and that meaningful learning occurs when individuals are engaged in social activities. Learners compare their version of the truth with that of the instructor and fellow learners to get to a new, socially tested version of truth Kukla The task or problem is thus the interface between the instructor and the learner. Some learning approaches that could

harbour this interactive learning include reciprocal teaching, peer collaboration, cognitive apprenticeship , problem-based instruction, web quests, Anchored Instruction and other approaches that involve learning with others. Collaboration among learners[edit] Main article: Learning by teaching Learners with different skills and backgrounds should collaborate in tasks and discussions to arrive at a shared understanding of the truth in a specific field. The importance of context[edit] The social constructivist paradigm views the context in which the learning occurs as central to the learning itself. Here the essentially interactive nature of learning is extended to the process of assessment. Rather than viewing assessment as a process carried out by one person, such as an instructor, it is seen as a two-way process involving interaction between both instructor and learner. The role of the assessor becomes one of entering into dialogue with the persons being assessed to find out their current level of performance on any task and sharing with them possible ways in which that performance might be improved on a subsequent occasion. Thus, assessment and learning are seen as inextricably linked and not separate processes. The feedback created by the assessment process serves as a direct foundation for further development. The selection, scope, and sequencing of the subject matter[edit] Knowledge should be discovered as an integrated whole[edit] Knowledge should not be divided into different subjects or compartments, but should be discovered as an integrated whole. This captures their motivation and builds on previous successes to enhance learner confidence. Then it awakens and rouses to life an entire set of functions in the stage of maturing, which lie in the zone of proximal development. It is in this way that instruction plays an extremely important role in development. Learners must not only have ownership of the learning or problem-solving process, but of the problem itself. This notion has been extensively used in curricula. It is important for instructors to realize that although a curriculum may be set down for them, it inevitably becomes shaped by them into something personal that reflects their own belief systems, their thoughts and feelings about both the content of their instruction and their learners. The emotions and life contexts of those involved in the learning process must therefore be considered as an integral part of learning. The goal of the learner is central in considering what is learned. Savery contends that the more structured the learning environment, the harder it is for the learners to construct meaning based on their conceptual understandings. A facilitator should structure the learning experience just enough to make sure that the students get clear guidance and parameters within which to achieve the learning objectives, yet the learning experience should be open and free enough to allow for the learners to discover, enjoy, interact and arrive at their own, socially verified version of truth. Current trends in higher education push for more "active learning" teaching approaches which are often based on constructivist views. Approaches based on constructivism stress the importance of mechanisms for mutual planning, diagnosis of learner needs and interests, cooperative learning climate, sequential activities for achieving the objectives, formulation of learning objectives based on the diagnosed needs and interests. While adult learning often stresses the importance of personal relevance of the content, involvement of the learner in the process, and deeper understanding of underlying concepts, all of these are principles that may benefit learners of all ages as even children connect their every day experiences to what they learn. Pedagogies based on constructivism[edit] Main article: Constructivist teaching methods Various approaches in pedagogy derive from constructivist theory. They usually suggest that learning is accomplished best using a hands-on approach. Learners learn by experimentation, and not by being told what will happen, and are left to make their own inferences , discoveries and conclusions. For example, they describe a project called GenScope, an inquiry-based science software application. Students using the GenScope software showed significant gains over the control groups, with the largest gains shown in students from basic courses. This study also found that inquiry-based teaching methods greatly reduced the achievement gap for African-American students. The constructivist approach, called CORI Concept-Oriented Reading Instruction , resulted in better student reading comprehension, cognitive strategies, and motivation. This study also found that students preferred constructivist methods over traditional ones. However, Kim did not find any difference in student self-concept or learning strategies between those taught by constructivist or traditional methods. In their initial test of student performance immediately following the lessons, they found no significant difference between traditional and constructivist methods. However, in the follow-up assessment 15 days later, students who learned through constructivist methods showed better retention of knowledge than those who learned through

traditional methods. It is argued that constructivist theories are misleading or contradict known findings. That is, it is maintained that if the requirements of the concept to be understood exceeds the available processing efficiency and working memory resources then the concept is by definition not learnable. This attitude toward learning impedes the learning from understanding essential theoretical concepts or, in other words, reasoning. If this condition is not met, construction goes astray. He describes this inappropriate use of constructivism as the "constructivist teaching fallacy". Slezak states that constructivism "is an example of fashionable but thoroughly problematic doctrines that can have little benefit for practical pedagogy or teacher education. Evidence for learning by studying worked-examples, is known as the worked-example effect and has been found to be useful in many domains e. The reasoning for this grouping is because each learning theory promotes the same constructivist teaching techniqueâ€"learning by doing. Mayer states that it promotes behavioral activity too early in the learning process, when learners should be cognitively active. This continuum of faded guidance has been tested empirically to produce a series of learning effects: In so far as there is any evidence from controlled studies, it almost uniformly supports direct, strong instructional guidance rather constructivist-based minimal guidance during the instruction of novice to intermediate learners. Even for students with considerable prior knowledge, strong guidance while learning is most often found to be equally effective as unguided approaches. Not only is unguided instruction normally less effective; there is also evidence that it may have negative results when students acquire misconceptions or incomplete or disorganized knowledge â€" Why Minimal Guidance During Instruction Does Not Work: An Analysis of the Failure of Constructivist, Discovery, Problem-Based, Experiential, and Inquiry-Based Teaching by Kirschner, Sweller, Clark [7] Mayer argues against discovery-based teaching techniques and provides an extensive review to support this argument. The main conclusion I draw from the three research literatures I have reviewed is that it would be a mistake to interpret the current constructivist view of learning as a rationale for reviving pure discovery as a method of instruction. He provides empirical research as evidence that discovery-based teaching techniques are inadequate. Here he cites this literature and makes his point "For example, a recent replication is research showing that students learn to become better at solving mathematics problems when they study worked-out examples rather than when they solely engage in hands-on problem solving. Yet a dispassionate review of the relevant research literature shows that discovery-based practice is not as effective as guided discovery. He proposes that the instructional design recommendations of constructivism are too often aimed at discovery-based practice. See the preceding two sections of this article. The math wars and discovery-based teaching techniques[edit] Main article: Math Wars The math wars controversy in the United States is an example of the type of heated debate that sometimes follows the implementation of constructivist-inspired curricula in schools. In the s, mathematics textbooks based on new standards largely informed by constructivism were developed and promoted with government support. Although constructivist theory does not require eliminating instruction entirely, some textbooks seemed to recommend this extreme. Some parents and mathematicians protested the design of textbooks that omitted or de-emphasized instruction of standard mathematical methods. Supporters responded that the methods were to be eventually discovered under direction by the teacher, but since this was missing or unclear, many insisted the textbooks were designed to deliberately eliminate instruction of standard methods.

Chapter 4 : Constructivist teaching methods - Wikipedia

Learning is a social activity: our learning is intimately associated with our connection with other human beings, our teachers, our peers, our family as well as casual acquaintances, including the people before us or next to us at the exhibit.

Chapter 5 : Constructivism - Learning Theories

Socio-constructivism, culture, and media (Vygotsky) Whether grounded in action as in Piaget's theory, or mediated through language as in Vygotsky's, most constructivist models of human intelligence remain.

Chapter 6 : Constructivism - Learning and Teaching - The University of Sydney

for learning and this fits in well with social constructivist approach. The figure bellow represents the key materials that students practiced in the CLE via using wiki technology.

Chapter 7 : Transformative Learning (Jack Mezirow) - theinnatdunvilla.com

Constructivism is basically a theory -- based on observation and scientific study -- about how people learn. It says that people construct their own understanding and knowledge of the world.