



A Review of Cooperative learning and related theories

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Abstract:

One of the legacies inherited to the scientists of the twentieth century from Charles Darwin has been the thesis of the inherent naturalness of human striving for superiority. Adopted by the "Social Darwinists", this qualified biological observation became a credo of those arguing for instinctive competition in human kind in all social and economic interactions. That is why our present educational system is mainly based on competition and this is reflected in almost every aspect of it. Students have to compete with their fellow students, right from the stage of admission to nursery class up to the highest level. Excessive competition robs of childhood from children and youth from the young adolescents. Competition is against the spirit of creativity also because it favors convergent thinking in place of giving children a chance to develop divergent ideas. We humans have been as successful as a species because of our ability to apply our intelligence to cooperate with others to accomplish group goals. It is difficult to think of adult activities in which the ability to cooperate with others is not important. Human society is composed of overlapping cooperative groups: families, neighborhoods, work-groups, political parties, clubs, teams etc. Because schools socialize children to assume adult roles, and because cooperation is so much a part of adult life, one might expect that cooperative activity would be emphasized in schools. However, this is far from truth.



Keywords: Cooperation, Competition, Cooperative Learning, Characteristics

Introduction:

There are many different fields studying collaborative learning (CL). This group based approach is beneficial in many areas such as instructional design, learning sciences, sociology, computer supported collaborative learning and educational psychology. Even though professionals in these fields may disagree on a theoretical basis, appropriate language, and research contexts, many of them believe that collaborative learning is the basis of human growth and development. Collaborative learning can be observed throughout history as being used in ancient gatherings to now present time scenarios such as online learning. Collaborative learning is when a group of learners all share opinions and experiences to build knowledge. Each person contributes equally with their own resources, perspectives, and knowledge to find a solution to the task given. The group must coordinate their different opinions into one cohesive structure and everyone depends on one another to work on a common task. Some aspects of CL that are considered when forming these groups are the group size, having a heterogeneous group versus a homogenous group, levels of ability of group members as well as race and ethnicity, the use of rewards, and the amount of structure of the tasks given to groups.

Definition of Cooperative Learning

Students' learning goals may be structured to promote cooperative, competitive, or individualistic efforts. In every classroom, instructional activities are aimed at accomplishing goals and are conducted under a goal structure. A **learning goal** is a desired future state of demonstrating competence or mastery in the subject area being studied. The **goal structure** specifies the ways in which students will interact with each other and the instructor during the instructional session. Each goal structure has its place. In the ideal classroom, all students would learn how to work cooperatively with others, compete for fun and enjoyment, and work autonomously on their own. The instructor decides which goal structure to



implement within each lesson. The most important goal structure, and the one that should be used the majority of the time in learning situations, is cooperation.

Cooperation is working together to accomplish shared goals. Within cooperative situations, individuals seek outcomes that are beneficial to themselves and beneficial to all other group members. **Cooperative learning** is the instructional use of small groups so that students work together to maximize their own and each other's learning. It may be contrasted with **competitive** and **individualistic** learning. In cooperative and individualistic learning, you evaluate student efforts on a criteria-referenced basis while in competitive learning you grade students on a norm referenced basis. While there are limitations on when and where competitive and individualistic learning may be used appropriately, any learning task in any subject area with any curriculum may be structured cooperatively.

Theories

Collaborative Learning has a robust theoretical background and can be justified in different educational settings based on theoretical support. Early investigation was mainly based in North America but since then has been studied all over the world. Here, some of the most influential theories that have played an important role in the emergence and development of the approach will be discussed. Socio-Cultural approach, Socio-Constructivist approach, Shared cognition approach, Second Language Acquisition perspective and Motivational theories.

Social-Constructivist approach

Piaget believed knowledge was formed by the relationship between a child and their environment that includes assimilation and accommodation. This adaptation to the environment results in cognitive growth. Experiences such as student disagreement can cause disequilibrium to this system. As they work together to synthesize their thoughts and come to an understanding, a cognitive equilibrium is then restored. Piaget developed a constructivist theory of individual's cognitive development, which inspired a group of psychologists known as the "Genevan School". These psychologists undertook investigation of how social interaction affects individual cognitive development. These scholars borrowed the major concepts such as "cognitive conflict" and "coordination of points of view" from Piaget. They described their new approach as socio-constructivist approach. They investigated the role of interactions with others rather than actions themselves. Peers may provide opportunities for others to experience cognitive conflict. According to Piaget, children are more likely to develop cognitively in contexts in which peers have equal power and all have opportunities to influence one another. The main thesis of this approach is that interacting with others and coordinating one's approaches to reality with those of others is the most effective way of mastering new approaches. Individual cognitive development is seen as the result of spiral causality: a given level of individual development allows participation in certain social interactions which produce new individual states which, in turn, make possible more sophisticated social interaction and so on.

Socio-Cultural approach

The second major theoretical influence comes from Vygotsky (1962-1978) and researches from the socio cultural perspective. The work of socio cultural theory is to explain how individual mental functioning is related to cultural, institutional, and historical context; hence, the focus of the socio cultural perspective is on the roles that participation in social interactions and culturally organized activities play in influencing psychological development. While the socio cognitive approach focused on individual development in the context of social interaction, the socio cultural approach focuses on the causal relationship between social



interaction and individual cognitive change. This theory attaches significance to the degree of difference among co-learners and defines the Zone of Proximal Development which is the distance between actual development level as determined by independent problem solving and the level of potential development under adult guidance or in collaboration with more capable peers. Based on the principles of this approach, Collaborative Learning by nature creates opportunities to develop students' cognition by actively communicating with new proficient peers and thereby expanding conceptual potential.

Shared Cognition Approach

The concept of shared cognition is deeply interred wined with the situated cognition theory. For these researchers, the environment is an integral part of cognitive activity, and not merely a set of circumstances in which context independent cognitive processes are performed. The environment includes a physical context and social context. Under the influence of sociologists and anthropologists, the focus is largely placed on the social context, i.e. not only the temporary group of collaborators, but the social communities in which these collaborators participate. This approach offers a new perspective on the socio-cognitive and socio-cultural approaches. In this approach collaboration is viewed as the process of building and maintaining a shared conception of a problem and all emergent conceptions are analyzed as a group product.

Second Language Acquisition Theories

The best known theories that look at Collaborative Learning from the perspective of second language acquisition are Krashen's Input Hypothesis and Swain's Output Hypothesis, both of which provided rational for why second language learners achieved better linguistic competence. The input hypothesis posited that SLA is driven by comprehensible input. The output hypothesis claims that while comprehensible input is necessary for L2 learning, learners need opportunities to speak and produce output in order to restructure their inter language grammar. During Collaborative learning, the exchange of ideas makes the negotiation of meanings possible. Through this process, students have opportunities to both receive input and produce output. Collaborative Learning makes the input possible as the linguistic level of members in CL groups maybe more or less at the same level.

Motivational Perspectives

Learning does not only involve cognitive skills but also includes aspects of how learners feel about learning. Slavin criticizes the competitive structure of the traditional classroom for creating opportunities to demonstrate superiority over one's peers, which can result in a destructive effect on academic effort. Motivational theorists have built models of incentive structures which incorporates variables of both one's own achievement and peers' attainment into CL methods. The rational for the collaborative learning structure is that if learners value the success of the group, they will be motivated to help one another to achieve as well. While linking motivation with Collaborative Learning, Social psychologists assume that attitudes exert a direction influence on one's behavior. This perspective suggests that collaborative efforts are fueled by extrinsic motivations so as to achieve the group rewards. Jones and Issr off (2005) conclude that Collaborative learning combines many aspects of the advantages of individual and social processes of learning, contributing to group members' participation and energizing students' learning by generating a powerful motivational system, resulting in better performance. Another theory related to motivational perspectives is the Social interdependence theory.

Current Areas of Research, Implications, Issues



These group experiences are shown to improve aspects of academic performance. They increase interaction and respect in diverse groups and improve social outcomes for students with learning disabilities. CL can enhance conceptual understanding and other higher order skills. In addition to these benefits, students also tend to enjoy this type of group work and is a welcomed change from the common passive learning environment as a more interactive and inclusive alternative. Learning with other peers can act as a motivator for students. Another important consequence of collaborative learning is that it has been shown to increase critical thinking. CL is different from the student-tutor relationship where one is the knowledge source. In collaborative learning everyone benefits and contributes equally.

The group work has a social skills aspect that cannot be derived from a teacher-student relationship. As mentioned above, this type of learning can remedy discrimination and increase acceptance among diverse group members and encourage interdependence. Peer acceptance increases school satisfaction, academic performance, and self-efficacy. For those with learning disabilities, they often have a hard time fitting in. The respect, social, and emotional support that comes from group work among equals is not something that can be derived from a teacher-student learning context.

Conclusion:

Cooperative learning is an educational approach which aims to organize classroom activities into academic and social learning experiences. There is much more to cooperative learning than merely arranging students into groups, and it has been described as "structuring positive interdependence." Students must work in groups to complete tasks collectively toward academic goals. Unlike individual learning, which can be competitive in nature, students learning cooperatively can capitalize on one another's resources and skills. Furthermore, the teacher's role changes from giving information to facilitating students' learning. Everyone succeeds when the group succeeds. Ross and Smyth (1995) describe successful cooperative learning tasks as intellectually demanding, creative, open-ended, and involve higher order thinking tasks. Cooperative learning has also been linked to increased levels of student satisfaction.

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