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How Can the Peer Leader Help Students in Workshop Trust their Partner's Knowledge? Alma Plaku

Abstract

I became interested in assisting the students in workshop to be more cooperative as a team by using the pair problem-solving method. This method helped the students communicate openly with each other by breaking the barriers of not being afraid or intimidated. Working in small groups students were able to discuss the workshop tasks and as a result, they built trust by performing better in Math 1175 (Fundamentals of Mathematics).

Observations

My group consisted of six students in MAT1175 (Fundamentals of Mathematics, covering Algebra and Geometry). The first workshop started with an ice-breaker. Firstly, the students were encouraged to form a circle and then to introduce themselves by saying their names and their majors. Getting to know other students in the first day of the workshop was intimidating for a couple of the students but for the majority of the group it was fun and a relaxing activity. This ice-breaking method created a positive atmosphere and also stimulated cooperation and participation among the students. Therefore, this procedure was an initial and important step so that the students can interact with each other and break down social barriers.

The Peer Leader explained the Pair Problem-Solving method (Narode, 2012). Students were separated into three groups and a series of problems were assigned. Each pair had a specific role. Each pair had a Problem-Solver and a Listener. In this introductory method explained by the peer leader, the problem-solver explains and analyzes the problem by solving it, while the listener collaborates with the problem-solver by asking questions to solve the task gradually and to find the solution of the problem. The listener must ensure that the problem-solver follows the right procedure to complete the task correctly. Pair Problem-Solving is an active way of learning that helps and improves the student's skills to solve a task.

Two different types of students were observed during the Pair Problem-Solving method: two pairs worked well, participating in the pair-problem solving method. The students were active and collaborated with each other. There was an open discussion and students were willing to share ideas. Students showed an interest in learning and felt comfortable among each other. They built trust and were confident while learning new information. Students shared their thoughts and opinions in how to solve the task and they felt certain in their answers.

One pair did not work well: Student who did not interact with the other student. One student was inactive and avoided participation. There was no exchange of ideas between the two students. The student worked individually. The inactive student worked alone continuously and did not expect to achieve any

positive results by cooperating with the other active student. His non-collaboration with the active student made the inactive student unable to understand the concepts and the student was gradually failing the course. The Peer Leader re-arranged the pairs; in the pair problem solving, the silent non-participant student was partnered with an active student.

The Active Student: Tried to help the inactive student by asking questions and suggesting comments and solutions to the problems. Also, he became tired of explaining the problem to the non-cooperative student.

The Peer Leader intervened and asked questions:

- What is the first step to solve the problem?
- How do you understand this 'concept'?
- How can you apply the information you have in your notes to solve the problem?
- How would you describe this solution?
- Which step should come before this step?
- What do you need to do to get to this point?

The inactive student could not correctly complete the assignment on his own so the Peer Leader would guide the student by asking questions and breaking down the problem into smaller pieces that would give hints to solve the problem further. In other words, the Peer Leader did not expect the inactive student to achieve excellence in the first time but with these simple practical questions would make the student feel encouraged and more certain in gradually solving the problems in the module. Eventually, the student progress in learning will rise.

Literature Review

Vygotsky suggested that learning involves the necessity of language, social interaction, and group work (Quain, 2011). Learning is helped by two methods: the idea of the Zone of Proximal Development (ZPD) (Roth, et al, 2001) and scaffolding.

The Zone of Proximal Development refers to the difference between what a student can do on her/his own and the help she/he needs from someone with recognized expertise in a subject matter (Quain, 2011), with further definitions:

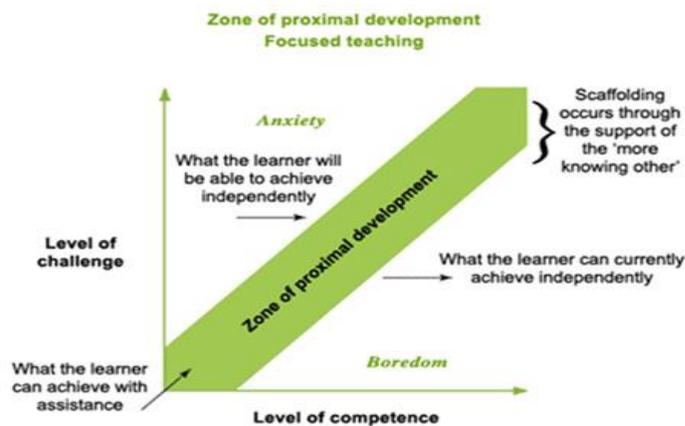
- Assisted Performance (Roth, et al, 2001): Students learn with the assistance of more capable peers.
- Unassisted Performance (Roth, et al, 2001): Concepts that students can learn without the help of the others.
- Full Internalization (Quain, 2011): The student is independent and the expert assistance is no longer required or needed, in fact the student performance is fully developed.
- De-automatization (Quain, 2011): Students cannot learn even with the assistance of the others.
- In collaboration, partners create zones of proximal development for each other where intellect and affect are fused in a unified whole (Mahn & John-Steiner, 2008).

Scaffolding

A method to help students learn by sharing knowledge and ideas among each other (Harry, 1996), supporting the students and encouraging them to improve further. This is done by breaking problems into smaller steps and leading students toward the correct solutions, then gradually removing support and allowing students more and more responsibility for their own learning as they become ready to perform the task on their own (Roth, et al, 2001). Effective scaffolding makes two major contributions (Harry, 1996):

- Makes it easier for the learner to undertake a task successfully
- Extends what is possible for a learner to perform.

Emotional scaffolding includes the gift of confidence, the sharing of risks in presentation of new ideas, constructive criticism, and the creation of a safety zone (Mahn & John-Steiner, 2008). College students learning cooperatively perceive greater social support from peers and instructors than do students working competitively or individualistically, according to Johnson, Johnson, & Smith (2010). The key factor at the heart of successful scaffolding is not only the ability of the more able learner/ to offer appropriate help, but also their ability to withdraw or fade the support they offer when the learner is ready (Mason & Lefrere, 2003). The withdrawal of support depends on the rate of progress readers that use strategies in order to solve the problems quickly and low progress readers use that rely on limited strategies for solving problems (Drzyzga, 2005).



Adapted from Hill & Crevola (unpublished)

Figure 1. VELS Level 1 and 2 - Zone of Proximal Development and Scaffolding.

Figure 1 represents the Zone of Proximal Development and Vygotsky's interest in student learning process which is guided by the peer leader and supported by the other students. Throughout this process it is observed the student's ability to perform a task on his own or even with assistance. The above ZPD diagram represents the new concepts that are introduced by the peer leader during the assisted learning and the grasped concepts during the independent learning. In other words, in the zone of proximal development, the peer leader's role and in accordance with the student's ability to grasp new information independently or in groups indicates the learner's current level of development, even while prior knowledge is essential to understand and build new knowledge. The practice of scaffolding is a method which is designed to support and have students interact effectively toward gradual improvement.

Discussion

Scaffolding is provided through discussion, interaction, engagement for students, all processes that make it easier for gradual improvement (Harry, 1996). Using the pair problem-solving technique allowed the students to interact and the active student to help the inactive student. However, the Inactive Student did not respond to the Active Student's help, discouraging the Active Student.

When the Peer Leader intervened by asking questions, the inactive student responded. As this student performs certain tasks with the help of their peers and the peer leader, the student will eventually gain the ability to do the task by himself. An emotional bond between the inactive student and the Peer Leader occurred through communication and questioning (Harry, 1996; Mahn & John-Steiner, 2008). The quality of the interaction between the participants is critical. Learning will be most successful when it is mediated by interaction that expresses mutual respect, trust and concern. When the student had no trust in his partner, he started to be non-collaborative and work on his own (Mahn & John-Steiner, 2008). When the student trusted the Peer Leader, he began to build more confidence and became active. The inactive student guided by the Peer Leader discussed and worked out the problems in the module step by step until the student becomes more confident and collaborates on his own.

Conclusion

Social interaction and motivation are beneficial in making students' learning more active and productive. Rather than having the inactive student drop the course by not being engaged, having the Peer Leader ask questions which engaged the Inactive Student allowed for useful scaffolding, and growth in the Inactive Student's ZPD. The inactive student gradually started to build confidence, trust and became more socially involved in the tasks given by the peer leader. The non-participant student gained confidence in his abilities and the active student that helped the other student learn and gain a new experience.

Working in pairs or in small groups, students were able to accomplish improvement and perform better in this course by discussing and analyzing the tasks from the modules with each other. Therefore, the peer leader plays an important role to help the students learn and start to interact socially.

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