

How Do Different Educational Theories Apply to Group Study?

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Abstract: In the development process of education, different educational theories can have a significant impact on the behavior of educators. This article will focus on how constructivism is reflected in group learning and combine it with other theories, such as behaviorism to analyze the advantages and disadvantages of constructivism. Based on the actual situation and educational models, some suggestions are proposed to improve the efficiency of group learning. The final conclusion drawn from this paper is that constructivism is the theoretical core of group learning, and the advantages of group learning can be maximized through appropriate teacher intervention and classified teaching. This study can successfully help educators broaden their thinking and change teaching strategies, thereby achieving more effective teaching outcomes.

Keywords: group study, constructivism theory, behaviorism theory

1. Introduction

Group study is a very popular teaching strategy in many international schools today. It refers to the method of dividing a class into smaller groups of students and asking them to share their ideas on certain issues so that they can learn from each other in the process [1]. Generally, each group will not contain many members, as it is important to ensure that all the students have ample opportunity to express their opinions and to develop a deep and high-quality discussion. In most cases, group discussions are considered to be effective in helping students learn to help each other while understanding the content of the course. It can also improve students' language competence and critical thinking skills. These advantages have helped make group study one of the preferred teaching strategies for many teachers [2].

Group study is considered useful because it is rooted in a number of assumptions about the theory of constructivism. Constructivism refers to the idea that each learner constructs meaning individually or socially as he or she learns. The knowledge they acquire is not directly provided by the outside world but is uniquely processed by their minds [3]. Since each member in a group constructs knowledge in their minds in different ways, they will analyze problems from different views and reach different conclusions. During the discussion, students' ways of thinking will influence each other, and they are likely to learn something they once ignored and then reconstruct new meanings, which may help them understand the course better and receive higher scores on the exams. However, the effectiveness of group study is questionable if it is based on other assumptions about how students learn [4].

This article will focus on how group study operates within the assumptions based on the theory of constructivism in the international schools represented by UWC. In addition, the essay will analyze whether other theoretical assumptions such as behaviorism theory, can also prove the effectiveness and superiority of group study. There will also be some possible improvements and alternatives that can help teachers better achieve their pedagogical goals, all of which are extremely important information for educators. Finally, the essay will also discuss why educators need to incorporate different theoretical assumptions and examine alternatives to achieve the goal of improving students' knowledge and test scores.

2. Literature Review

2.1. Advantages

The effectiveness of group study relies heavily on students' ability of reflecting and reorganizing their knowledge after they have shared their ideas. This purpose can only be achieved based on the constructivist assumption that learners will construct knowledge for themselves. Constructivists believe that the process of learning is that learners actively construct meanings rather than passively accept knowledge which already exists [3]. That's the reason why the members in the groups will be motivated to draw new knowledge from others' perspectives. And then based on their own current understanding of certain topics, they begin to evaluate and analyze the new idea and reorganize the knowledge system in their minds in order to achieve progress. The assumption based on constructivism also prevents learners from agreeing with all the knowledge they receive and failing to identify false information. Group study also effectively meets the two aspects of teaching that constructivists believe: engaging students in the phenomena related to the topic and allowing them to continue thinking and wondering about it; and allowing students to try to explain the sense they are making, rather than having the teacher explain everything directly to them [4]. Group members often take on the roles of both teacher and student in the whole discussion, which means that they need to learn to explain themselves and understand the other's thoughts at the same time [4]. During this process, they will continue thinking and constructing new meanings and knowledge in relation to their previous knowledge base. According to the definition of the constructivist theories of learning, the process of reorganizing information in students' minds during discussions is the definition of learning.

From this point, group study is indeed more effective in cultivating students' interest in learning and stimulating the breadth and depth of their thinking since learning more about different ways of constructing knowledge broadens students' thinking patterns and allows them to link to more different academic fields under a limited topic. In addition, the overall atmosphere of group discussions is more relaxed than that of a normal course and provides learners with more freedom to discuss, which can better guarantee their interest and desire to explore knowledge and stimulate them to actively construct meanings and knowledge based on real-world experiences.

2.2. Disadvantages

However, the disadvantages of this practice are also obvious. Since each learner has a different level of basic knowledge, it is difficult for educators to ensure that each group member is able to understand others' ideas and at the same time, combine them with their prior knowledge and construct new meanings during the group discussion. If the content is beyond the learners' current savvy, they may not get any improvement in the process and make the group discussion a waste of time [3]. Moreover, for some of the students, they will inevitably construct ideas that are somewhat radical or not entirely correct during group discussions. If the educator or other group members fail to detect and correct them in time, the learner may store the wrong information in his or her mind, which may have a

negative impact on deeper learning. Thus, even from a constructivist perspective, the reliability and validity of group study remain questionable, and the practice may even lead to negative effects.

2.3. Compared with Behaviorism

If group study is placed in the context of other theoretical assumptions, its shortcomings would be even more evident. For example, from the perspective of behaviorists, who see learning as a process that can be observed through behavior change [5], educators can help students learn by implementing reinforcement (like rewards and punishments) to control their behavior [6]. For the practice of group study, since it is mainly a student-centered strategy, it is difficult for educators to intervene or implement reinforcement, and changes in learners' behavior are less likely to be observed during the whole process. At the same time, because group study is a practice that requires a long period of time to be checked for results, the rewards (like the improvement in test scores) are not evident in the early stage, which may cause many students to lose motivation to continue learning and to make sustained changes in their behavior. For example, they may give up continuing helping each other in groups or doing more exercises before the tests. From this perspective, group study cannot be identified as an effective educational strategy.

3. Research Question

Group study is a strategy that many international schools now use to guide students to learn new things from each other during the discussion process. This practice has been commonly used worldwide since it fits perfectly with the definition of learning from a constructivist perspective. However, according to other learning theories, such as behaviorism, it remains questionable whether this teaching strategy is effective enough. Behaviorism may argue that group learning is difficult to reinforce through rewards or punishments, and that students' behavior change is not evident after group learning [5]. Thus, educators need to re-examine the validity and effectiveness of group study as an instructional practice and actively seek better alternatives to this strategy. This research paper will mainly examine the following question:

What does educational research literature say about how can educators enhance the effectiveness of group learning?

In the following pages, the essay will focus on several possible strategies that can effectively solve this problem, including multiple-abilities treatment in complex instruction and contingent teaching in scaffolding theory. It is going to explain each strategy separately and give some examples to make the abstract theory more understandable. The importance, advantages, and disadvantages of these two strategies will also be analyzed respectively, and be combined with the constructivism mentioned above. The essay will then judge whether these two strategies can effectively improve the efficiency of group study through comprehensive consideration.

4. Evaluation

The essay chose to focus on the impact of educators' behavior on group study because the teacher's role in supporting small groups received relatively little attention [7]. However, there are many potential problems with relying solely on students to collect information and find proper materials when learning since students cannot accurately judge the professionalism of the materials they have found. Moreover, without external intervention, it is difficult for students to maintain sustained learning motivation only based on their interest in the topic, which may lead to low learning efficiency or students giving up on learning.

4.1. Complex Instruction – Multiple-abilities Treatment

Complex instruction is a group-based teaching method aimed at achieving basic educational goals while ensuring equal interaction among learners, striving to effectively share resources and improve the learning efficiency of small groups by utilizing differences between students of different levels in a reasonable manner. In order to prevent unequal participation in discussions among students, which leads to unequal opportunities and knowledge for students, or to reinforce biases and stereotypes during this process, complex instruction deliberately breaks the inherent role allocation and hierarchical system in group learning. In many cases, educators intervene to make adjustments [8].

One special strategy that plays an important role in solving inequality problems in complex instruction is multiple-abilities treatment. The foundation of multiple abilities treatment is to broaden the concept of “smart”. Educators need to make students understand that each person has their own strengths and weaknesses. Students need to have a correct understanding of different types of multi-abilities and learn to use their strongest skills to help group members [9]. For example, in a poster production task, students who excel in drawing may not be able to complete the task of collecting and analyzing academic materials well, while students who excel in processing complex professional materials may lack artistic abilities. In group learning, these two types of people need to be assigned tasks that are suitable for their abilities and ultimately achieve the most effective group learning through collaboration. This approach can effectively avoid learners wasting a lot of time and energy on tasks they are not good at and ensure that the products of each link in the group learning process have the highest quality and minimize the probability of making low-level mistakes, which greatly improves the efficiency of group learning.

In addition, multiple-abilities treatment can also enhance students’ confidence and interest in learning. This educational strategy successfully creates a mixed set of expectations for learners, breaking the widely held belief that high rankings are better than low rankings [9], and making students realize that although they cannot do their best in all aspects, they have strong talents and abilities in a certain area. Under such cognition, students will have more enthusiasm and motivation to actively acquire knowledge through their skills and use their strengths to bring valuable information to others in group learning. Meanwhile, as no one can perfectly master all abilities, cooperation among members becomes essential in order to complete tasks or achieve success [9]. Everyone is an important resource for the team, and everyone must carefully listen to the opinions and ideas of others (even if the other person may have a lower status in the class or may not be considered intelligent by a single intellectual dimension standard) because that person has abilities that they may not have. In such situations, students with lower status can maximize their participation in group learning discussions and have the opportunity to express their opinions, thereby reducing the unequal opportunities for students to speak and acquire knowledge, and maximizing the benefits for everyone in group learning, thereby improving learning efficiency.

However, multiple-ability therapy also has some drawbacks. This is a brand-new educational method for many teachers and they lack experience and training, so sometimes they face a lot of pressure when dealing with problems that arise during the process. If the ability arrangement between students of different statuses is not well regulated, the contribution and value of low-status students may be ignored, and classmates may be simply treated as neighbors rather than resources. Cooperation is not so much like an interdependence of intelligence and resources, but a condescending attitude towards students with low status [10]. In addition, due to the fact that most public schools adhere to a teacher-centered model, transitioning to a student-centered style can take a long time and may also lead to “educational dilemmas” [11]. Teachers may also need to find more new strategies to address school restrictions and teach in a more open manner [11].

Multiple-teaching treatment is also in line with constructivism theory. Constructivists believe that every learner constructs meaning individually or socially during learning [3]. People who excel in different fields have different ways of thinking, perspectives and conclusions drawn on the same problem. Sharing different knowledge through group discussions can help learners form a larger and more complete thinking system, thereby learning more in the process.

4.2. Scaffolding Theory – Contingent Teaching

The scaffolding theory describes the scaffolding process from the perspective of the supervisor's adaptability to students' understanding of the control level. Its purpose is to guide students to learn to independently complete tasks and take responsibility by providing them with teachers' irregular support [12]. The core feature of scaffolding teaching is contingency, and teachers are encouraged to only give students a certain amount of control and intervention at appropriate time. That is to say, when students fail, teachers need to give more control, such as providing answers to questions directly or some detailed explanations, while giving less control, such as asking open-ended questions for simple guidance, when they achieve success [12].

The effective implementation of contingent teaching requires teachers to have accurate estimates of students' understanding and provide appropriate challenges for students at different levels to customize personalized programs [7]. Therefore, before conducting formal teaching, teachers need to communicate with each group and each member to understand their existing basic knowledge and ability level, as well as the existing strategies of the entire group, and provide assistance based on these. This approach has been proven to be more effective than directly providing content-oriented and process-oriented approaches [7]. At the same time, in the case of contingent teaching by teachers, students with poor foundation will be provided with additional guidance to better keep up with the pace of other members of the group and will not be excluded from the discussion and can gain more knowledge. Contingent teaching can also ensure that the direction of the whole group's research is always correct. Each intervention can help identify the problems that students are not aware of at this stage, and guide students to change their ways of thinking to correct mistakes. This can effectively prevent students from being misled by wrong ideas during group discussions and affecting subsequent learning.

However, the disadvantages of contingent teaching are also obvious. It is very difficult for teachers who have no training or insufficient practical experience to correctly assess students' understanding and provide appropriate control. If a teacher mistakenly increases their control over students, it indicates that the teacher underestimates students' understanding ability, which can lead to too few or too simple challenges provided by the teacher, leading to a waste of time for students to learn knowledge that is suitable for their own level. On the contrary, if the teacher mistakenly reduces control over the student, it indicates that he or she overestimates the student's understanding ability, so that the teacher will provide too many high-level challenges. In this case, even if the teacher provides a sufficient explanation, the student's current level may not be able to fully understand, leading to comprehension barriers for the student [12]. If this educational strategy is implemented in reality, it is necessary to ensure that teachers have a sufficient understanding of students and have received professional training to provide appropriate assistance to students.

Anyway, contingent learning is a good embodiment of constructivism theory. Students mainly rely on their own brains to construct meaning during the learning process, rather than directly obtaining knowledge from the outside world. Therefore, external assistance should not excessively affect students' own thinking or force them to shape their ideas but should serve as an auxiliary tool to ensure that students can draw conclusions in the most effective way on this basis.

5. Conclusion

In this work, I analyzed the core concept of group learning and the advantages and disadvantages of this educational method based on constructivist theory, and provided some improvement suggestions. In general, group study can effectively promote mutual learning through cooperation and communication between students and can enhance their critical thinking ability and language skills. This is also why group learning is globally accepted and applied in various educational institutions. According to the theory of constructivism, students construct personal or social meaning in their minds in different ways, and group discussions provide students with the opportunity to exchange different conclusions they have drawn on the same problem through different ways of thinking, thereby expanding their way of thinking and helping them gain new knowledge. Although this educational strategy still has many drawbacks, such as students may lack motivation, group members may have different levels of basic knowledge, or students may make some unconscious mistakes during the discussion process. Fortunately, educators can effectively improve the efficiency of group learning through alternative methods. Educators need to learn to use the strategy of using multiple-abilities treatment, guiding students to discover and apply their strengths and collaborate with other members of the group to complete tasks. Educators also need to use contingent teaching methods to intervene appropriately in group learning, provide appropriate personalized challenges according to students' understanding level, and help groups ensure that the overall direction of research is correct. If educators can successfully master these strategies and apply them to real class group discussions, the teaching scheme of group discussion will become a more perfect and effective teaching tool.

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