How Can Group Work Be More Effective in Classroom?

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Abstract: In order to meet the needs of modern teaching, the use of group work in the classroom has become an indispensable part because it better creates opportunities for students to take the initiative to learn and effectively helps students to take the leading position in the classroom. The purpose of this article is to explore how group work can play a more significant role in the classroom. This paper analyzes the use of group work in the classroom through various theories based on how people learn, such as behaviourism, sociocultural, etc. At the same time, some methods to improve the use efficiency of group work are also proposed through research.

Keywords: group work, interactive learning, classroom teaching form.

1. Introduction

In the modern classroom, group work is commonly used to stimulate students' participation in the classroom because it can provide students with collaborative learning opportunities and effectively help teachers engage students [1]. Group work refers to students working together in small groups, promoting their understanding of the task and completing it by presenting their ideas and exchanging information through discussion. Studies have shown that students are more motivated to learn and, more importantly, achieve higher academic achievement when they work in groups than when they study alone [2]. However, during my high school teaching experience, I observed some problems when using the group work method in a class; for example, some group discussions are intense while others are quiet; some students speak actively in the group while others keep silent and listen. As a result, in my opinion, it is worth discussing how to enhance students' participation in class through group work and ensure everyone's concentration in class.

Group work is based on several assumptions related to constructivist learning theory. Hein stated that constructivism focuses on learners individually or socially constructing knowledge for themselves. It is a learning process that occurs through interaction [3]. The assumption about group work is that the process of students participating in it is active and social because it is full of interaction. At the same time, the effectiveness of group work may be questioned based on other learning theories.

In this paper, firstly, I will start by explaining how group work based on constructivist learning theory reflects how people learn. Next, I will discuss whether group work can work well to improve student participation in class from the assumptions of different learning theories, such as cognitive theory and sociocultural theory. Moreover, I will discuss some approaches to making group work

more effective and the theoretical underpinning that supports them. Finally, I plan to talk about why this widely used classroom practice and its theories are worth studying.

2.　Theoretical Framework

Group work is grounded in constructivist assumptions about how people learn. Hein described several constructivist-related principles of learning that can reflect how people learn in group work. To begin with, from a constructivist point of view, learning can be viewed as an active process which enables students to construct meaning internally [3] spontaneously. Constructivism enthusiasts believe that learning takes place within the mind of the learner. In group work, the teacher creates an active learning environment for students to express their ideas freely, rather than passively accepting the knowledge conveyed by the teacher, like in the old-style classroom. The process of freely and actively expressing is a process of constructing learning within the learner; every thought the students presents comes from inside their minds. Secondly, Hein stated that language is one of the most important factors affecting learning [3]. From my aspect of view, language, as a carrier, can be regarded as the basis of people's communication and interaction. Group work usually requires a large amount of communication between students, which can effectively promote the comprehensive development of learners' language ability [1]. Thirdly, Hein stated that learning could also be recognized as a social activity; it comes from our interactions and connections with other people [3]. Sainsbury and Walker also viewed group work as a sociocultural task because they recognized that learning happens in a social context [4]. For instance, our family, friends, teachers, classmates, and so on can impact our learning. Group work has been shown to include many approaches to promote social skills, such as actively expressing one's ideas, listening carefully to others, sharing responsibility for group tasks and sharing resources relatively [5]. When a student is in a group, he inevitably needs to socialize with other members by exchanging ideas, asking questions, explaining his own thoughts and many other ways suitable stimuli to constructing knowledge. At this point, the group can be regarded as a community or small society where students interact socially to learn for themselves. Interaction, discussion, sharing and searching among learners are necessary and should be encouraged [3].

Moreover, group work is always full of explanations, sometimes to simply state their ideas, and sometimes it is necessary to convince other group members to agree with their points. Students will generate further understandings for themselves in the process of explanation. According to constructivist learning theory, learning exists in explanation, meaning that students can understand the knowledge more clearly when explaining it to others [6]. This makes group work an effective way to help students learn.

In addition, motivation plays a vital role in learning because it is not only necessary for learning but also can effectively help or stimulate learning [3], which reflects that learning is active from a constructivist perspective. For example, in traditional teacher-based teaching, the student's responsibility is passively receiving knowledge. Differently, in the form of group work, as a part of the group, the students began to realize that they needed to complete the task through their efforts; everyone needed to actively participate in the activities and take responsibility in order to achieve the goal. Therefore, comparatively speaking, the form of group work may bring more motivation for students to engage in class.

Analyzing the practice of group work from the perspective of other learning theories may yield different results. For example, examining group work from cognitivist theory may reflect different views. From a cognitive perspective, successful learning is achieved through the coordination of multiple cognitive processes, and the regulation of learning may include monitoring activities, thoughts, emotions and other aspects [7]. Self-regulation and external intervention may occur during this monitoring process [7]. Taking my experience, for example, when implementing group work in my high school class, I sometimes find that some students discuss things unrelated to the group tasks

because they freely form groups with familiar people or friends. This situation is the manifestation of their lack of regulation. On the one hand, they cannot correctly self-regulate their behaviours and thoughts to focus on class; on the other hand, they also lack external monitoring such as teacher's monitoring or evaluation during the process to realize the effectiveness of group work.

Rather than analyzing group work through constructivist learning theory, sociocultural theory can also illustrate some points about how people learn in group work. Vygotsky's sociocultural theory introduced the concept of the zone of proximal development, which refers to the space between a learner completing a task independently and under the guidance of someone with more knowledge [8,9]. Based on this sociocultural theory perspective, van de Pol, Mercer and Volman stated that learning is often guided by others, particularly by more knowledgeable people, taking the most common example, teachers [10]. Instead of ignoring support, applying support may better affect learning. In group work, students depend more on themselves to arrange and organize activities to complete tasks. There will be a lack of teacher guidance in this process, which may lead to low learning efficiency.

Group work has become one of the essential means of modern teaching methods, which is applied in the classroom to help students achieve higher academic achievement [2]. Although it has much support, it can also be doubted through some theoretical lens. From the perspective of cognitivist learning theory, the coordination of the cognitive process may be weakened in group work, and students may lack self-regulation ability, which leads to their inability to concentrate on class tasks. From the perspective of sociocultural theory, appropriate intervention from a more knowledgeable person, such as a teacher, can benefit learning. On the other hand, the lack of guidance may reduce the effectiveness of group work and negatively impact classroom participation. In order to enable educators to understand group work better, this research paper examines the following question:

What is known about instructional strategies that teachers can use to make group work more effective?

In the following few pages, I will examine the research on several strategies that can promote the effectiveness of group work. I will explore strategies from different aspects, including what these are, how they reflect the theoretical knowledge of how people learn, how researchers find their effects on group work through research, how to apply them in group work, etc., and eventually conclude.

3. Strategies

3.1. Group-worthy Tasks

In the first place, the question I want to explore is, what is a worthwhile task for group work? According to Shulman, Lotan and Whitcomb, group-worthy tasks have some characteristics. First, practical group tasks must be open-ended and indefinite so that students can analyze and explore problems in the context [11]. Shulman, Lotan and Whitcomb mentioned the example of a high school chemistry teacher who asked the students to investigate the behaviour of gases based on the effects of concentration, temperature and pressure through group work. By identifying problems, hypothesizing solutions, analyzing possible outcomes, and so on, students present excellent results through active learning rather than simply relying on the teacher to confirm opinions and give the correct answers. Open-ended, problem-solving learning requires students to question, analyze, explore and come to a conclusion as they go along instead of simply settling on a correct answer.

Shulman, Lotan and Whitcomb also stated that cooperation depends on active interdependence among members [11]. If a task is manageable and not challenging for students to complete independently, working in groups on the task is likely to be less effective than working alone. At the same time, tasks suitable for group work are tasks that require many different skills and intelligence [11]. Another example in Shulman, Lotan and Whitcomb showed a lonely student who was excluded

at the beginning, demonstrated his architectural talent in a group work set by the teacher requiring a variety of abilities, gained recognition from his classmates and gradually integrated into the environment. It is only in capacity-demanding and open-ended group tasks that the interdependence between group members becomes more muscular, and students get more opportunities to show their abilities because the tasks are diverse and the demands are as well. A group task with multi-dimensional opportunities and goals can provide value for students to choose from. Students who expect success in the task will be more motivated to complete the task and make more efforts [7], and only well-designed and multi-dimensional group-worthy tasks can provide chances to develop students' abilities further and motivate them to contribute to group work.

3.2. Methods of Grouping Students

3.2.1. The Ideal Group Size

Research has shown that four members per group are ideal for working in a group [12]. However, when students study in a larger group, the contribution of each member is relatively small. In addition, because there are many members, it may be challenging to agree on opinions or goals in the process of group cooperation, which is not conducive to completing the task of group cooperation and affects the effectiveness of learning [13,14]. In contrast, working in smaller groups allows students to better immerse themselves in class and tasks and improve their concentration [15]. In addition, Davis also said that smaller groups could effectively reduce the occurrence of "loafers" and "slackers" and thus prevent the occurrence of intragroup conflicts caused by individual students shirking their responsibilities [16].

3.2.2. Assigning Group Members

In general, we have several ways to assign members to a group. For example, the teacher randomly groups the students, lets the students group freely, or the teacher assigns the students to be in a group. Burke showed that grouping students properly is an essential part of successful group work [13]. However, as I mentioned earlier, if students were asked to form a free team, they were more likely to form a team with their friends or people they knew well. In this case, in the process of group work, their attention may be more focused on the social interaction rather than the task, which causes certain obstacles to the progress of group work [13,17]. Therefore, research shows that assigned by the teacher when grouping seems to be a better choice to promote the effectiveness of group work [18].

3.3. Rewards for Group

From the behaviourist point of view, an effective way to get people to adapt to behaviour is to reward that behaviour. Schwartz, Tsang and Blair carried out an experiment on training a chick to turn its back to the fence. In this experiment, the researcher guided the chick to turn its back to the fence through continuous positive reinforcement, demonstrating the role of external reward in shaping behaviour. Reinforcement can lead people to perform behaviours and stay engaged, meaning rewards are motivational [19]. National Academies of Sciences, Engineering, and Medicine [7] also stated that extrinsic rewards can be an essential motivation for learning without undermining individual autonomy and control [7]. Similarly, in group work, we can use appropriate external rewards, such as praise during the process of the task and points given to each group, to improve student's learning motivation, stimulate students to participate in group tasks more actively, and appropriately guide students to cooperate more effectively, to create better task results. It is worth noting that while researchers demonstrated that extrinsic rewards might be the most effective, as an educator, we must pay attention that the secondary reinforcement, such as points and badges, is more effective than the

primary reinforcement, which includes food and drinks [19]. For example, we can create a token economy to reward students for participating actively in the task and completing the task instead of giving snacks, which may make students pay too much attention to the reward rather than the task itself.

3.4. Self & Peer Assessment

Some researchers noted that common teacher assessments tend to focus more on correcting the result and less on providing feedback to improve quality [20]; Baker also pointed out that teacher assessments may often overlook procedural evaluations [21]. Furthermore, experimental data from Rezaei also indicated that most students agreed that it was necessary to include both teacher and student assessment in group work evaluation [14]. In the following section, I will examine the effective assessment mechanism in group work from two dimensions: self-assessment and peer assessment.

3.4.1. Self-assessment

As Boud and Falchikov, the primary goal of higher education is for learners to be able to self-evaluate the value of themselves and their works [22]. In his research, Scott conducted a self-assessment experiment in a group study. In the section showing the experiment results, he mentioned the feedback of two students who participated in the research. The first student said that although it felt strange to be asked to grade his work, the self-assessment gave him a new perspective to rediscover his strengths and weaknesses. Another student mentioned that he was allowed to realize his mistake by criticizing his work and using it to improve his performance next time to avoid making the same mistake again. We can see from the two feedbacks that self-assessment in group work can enable students to judge whether their behaviour and efforts have done their best before producing the final result, thus enhancing the effectiveness of group tasks to a certain extent [20]. In addition, Scott also noted that students improving their ability to assess themselves by participating in feedback processes actively could also develop their life-long learning ability [20]. Although teacher assessment is more essential and common, self-assessment also plays a vital role in group work.

3.4.2. Peer Assessment

Rezaei mentioned two advantages of allowing students to do peer assessment in group work. First of all, it is an efficient way to evaluate your peers and your work [14]. There may be many dimensions in peer assessment, such as the initiative of each member to participate in the group task, the degree of contribution to the group task, friendly communication with other group members, etc. In the assessment process, students can judge their peers according to the requirements and reflect on their behaviour to establish a better learning attitude to participate in group work [14]. Secondly, another advantage of peer assessment is that it is more acceptable to be evaluated by the peer than by the instructor [14]. Moreover, Lai, Jong, Lin and Hsia mentioned in Rezaei stated that students believed that the teacher has not seen many details in the process of group work but has made judgments based on the final results might be the main reason [14]. Baker reflected that many details and factors affecting the success of group work might be ignored because teachers only pay more attention to the final results presented by the group [21]. On the contrary, as a part of the team, each group member continuously participates in activities during the task process and has a clearer understanding of their partners' behaviour, performance and contribution, which can objectively provide a more comprehensive and detailed perspective for assessment in group work. As Baker said, as a result of being the best observers, peer assessment improves the accuracy of group work evaluation. It gives

group members a stronger sense of accomplishment, thus extensively promoting the development of the effectiveness of group work [21].

4. Conclusion

In the current educational environment, active learning has become the focus of the educational field, and group work is a vital teaching method [13]. In this paper, I firstly examined group work from four perspectives based on constructivism-related assumptions: group work provides an active learning process, allowing students to construct learning internally; group work provides plenty of communication opportunities to use languages that are important in learning; group work can be seen as a social activity reflecting constructivist theory; and it can help students understand their knowledge better by explaining, which can generate learning from constructivist view. Moreover, according to the constructivist perspective, group work produces more motivation to engage students in class.

Then, I analyzed the possible defects of group work from different theoretical perspectives. First, from a cognitivist perspective, there may be a lack of self-regulation and external monitoring in-group cooperation. Secondly, based on the concept of the zone of proximal development in sociocultural theory, the lack of guidance from people with more knowledge in group work may reduce its effectiveness.

In the following sections, I proposed several ways to enhance the effectiveness of group work through an analysis of other research. Firstly, the group work task should be group-worthy to provide multi-dimensional opportunities to stimulate effectiveness. Next, the suitable size for group work is four members in each group, and the teacher assigns the most effective way of grouping; thirdly, appropriate external rewards such as token economy are effective for group tasks, reflecting the theoretical basis of behaviourism; finally, self-assessment and peer assessment can provide more comprehensive and accurate evaluation for group work, so as to promote students' devotion to group tasks.

Group work is an integral part of modern teaching, and as an educator, we need to use it with an understanding of what we want to achieve by using it, rather than blindly using it just because it is a trend nowadays. Our responsibility is to hold a critical view of this teaching method and apply it rationally to achieve better effectiveness. Although I have explored this article extensively, many places are not mentioned and are not comprehensive due to the lack of practical investigation. For example, how to set up a feasible assessment mechanism to balance the assessment of self, peer and teacher to achieve the better effect is worthy of further exploration.

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