



## The Influence of Blended Cooperative Learning Instructional Model on the Learning Achievement and Designed Characteristic Behaviors of College Students' Ideological and Moral Education Course

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Received 15/02/2023

Revised 07/03/2023

Accepted 08/03/2023

### Abstract

**Background and Aim:** At present, in the reform of higher education, the cultivation requirements for innovative people are increasing day by day. The learning results and desired characteristic behaviors of college students in ideological and moral education in many universities are not satisfactory. Student's learning attitudes and learning participation are poor and the ability of self-discipline and adaptability are generally weak. So in order to solve the problems, in this study, the blended cooperative learning instructional model was employed to improve the learning achievement and desired characteristic behaviors of college students. The objectives of this research were: 1) To compare the learning achievement of college students before and after learning through the Blended cooperative learning instructional model. 2) To compare the desired characteristic behaviors of college students after learning through the Blended cooperative learning instructional model with a criterion set at 65%.

**Materials and Methods:** The sample used in this study was 30 year 1 student in Zhoukou Vocational and Technical College, Zhoukou City, Henan Province. They were selected by cluster random sampling. The research instruments were: 1) Six lesson plans of an Ideological and moral education course based on blended cooperative learning. 2) A learning achievement test paper. 3) A student's self-assessment 4) A teacher observation form. The researcher used the Ideological and moral education test paper to conduct pre-test and post-test on the sample. Then the pre-test data and post-test data were analyzed. The statistics used to analyze data were mean, standard deviation, t-test for dependent samples, and t-test for one sample.

**Results:** The results of the study were as follows: 1) The learning achievement mean scores of students' protest were 16.13, S.D. = 3.25 and the posttest of students' learning achievement was  $M=19.93$ , S.D. = 2.75. The result showed that after learning through a blended cooperative learning model in the classroom, posttest scores of students' learning achievement were greater than pretest scores at 0.05 level of statistical significance ( $t=9.58$ ,  $p=0.000 < 0.05$ ). The average scores of the study developed increasingly higher than the pretest. 2) The Self-assessment mean scores of 30 students' desired characteristic behaviors after learning through the blended cooperative learning model was 106.77 from full marks of 155 and the standard deviation was 6.20 which was statistically higher than the criterion of 65% at 0.05 level of statistical significance ( $t=94.30$ ,  $p=0.000 < 0.05$ ). The observation form mean scores of 30 students' desired characteristic behaviors after learning through blended cooperative learning model was 44.57 from full marks of 60 and the standard deviation was 4.16 which was statistically higher than the criterion of 65% at .05 level of statistical significance ( $t=7.33$ ,  $p=0.000 < 0.05$ ).

**Conclusion:** Through comparative analysis of learning achievement and desired characteristic behaviors scores before and after learning through the blended cooperative learning model in the Ideological and moral education course of first-year students in Zhoukou Vocational and Technical College, it revealed that students' learning achievement and desired characteristic behaviors have been significantly improved. Therefore, it is feasible to adopt a blended cooperative learning instruction model, which is helpful to improve the learning achievement and desired characteristic behaviors of the first-year students at Zhoukou Vocational and Technical College.

**Keywords:** Ideological and Moral Education Course; Blended Cooperative Learning Instructional Model; Learning Achievement; Desired Characteristic Behaviors

### Introduction

College students are the successors of socialist construction, carrying the future and hope of the motherland. The desired characteristic behaviors of college students such as social responsibility, self-





management, and self-discipline are the embodiment of their personality quality and have a profound impact on their behavior model and results. The Ideological and moral education course is an important channel to train college students to have the desired characteristic behaviors by society. This topic has attracted the attention of the state and education circles.

The Opinions on Further Strengthening and Improving the Ideological and moral education of College Students issued by the CPC Central Committee and The State Council (2004) emphasized that "Ideological and moral education course in colleges and universities are the main channel of the ideological and moral education of college students, giving full play to the leading role of the Ideological and moral education course teaching in the ideological and moral education of college students". "Contact the ideological reality of college students, imparting knowledge with ideological education, combining theory with practice, practical reform of teaching content, improve teaching methods, improve teaching means". This provides a theoretical reference for improving students' ideological and political status (social responsibility, self-management, and self-discipline) with the new teaching model. Opinions on Further Strengthening and Improving Ideological and moral education Course in Colleges and Universities (2005) issued by the Ministry of Education, Ideological and moral education course is taken as compulsory courses for undergraduate majors, and the training objectives, training tasks, specific course settings and course contents of Ideological and moral education course are specified. The course of ideological and moral education formally becomes an integrated course of education, guidance, and service aimed at solving practical problems in the growing process of college students. The document points out the important role of ideological and moral education courses in cultivating the desired characteristic behaviors of college students. However, in the current practice of higher education, the teaching results are not significant in many colleges and universities in the desired characteristic behaviors are generally low phenomenon. For example, The learning objectives are not clear; there are no effective learning methods; Students lack initiative and interest in learning; their learning attitude and learning participation are poor. learning purpose is not clear, learning attitude is not correct; The popularity of smartphones makes the Internet ubiquitous, which seriously affects students' normal learning; The ability of self-discipline and adaptability are generally weak; Poor self-management ability, no sense of responsibility, lack of independent thinking, independent living ability; Lack of gratitude (Jianshuang, Z., 2016)

Kekang, H., (2003) believes that blended learning is to combine the advantages of traditional learning with the advantages of online learning; In other words, teachers should not only play the leading role of guiding, inspiring, and monitoring the teaching process, but also fully reflect the initiative, enthusiasm, and creativity of students as the subject of the learning process. Kedong, L., (2004) proposes that blended learning is a teaching method that integrates face-to-face teaching and online learning to reduce costs and improve benefits. And in 2020, Qianru, L., stated that blended learning is the integration of teaching content with appropriate information technology means and the use of appropriate teaching and learning methods to complete the teaching process in order to achieve the best teaching effect (Qianru, L., 2020).

Conclusion: Blended learning refers to "a kind of learning environment that combines face-to-face teaching and teaching based on technology media". It takes advantage of the two learning modes to reorganize and implement learning activities, so as to achieve the goal of improving teaching efficiency. Xiaoping, X., (2007) discussed the cooperative learning model in the Discussion on the cooperative learning model of Ideological and moral education courses in Colleges and Universities. This instructional model highlights the independence and complementarity of the teaching cooperative. According to the teaching, the content will be divided into several topics, according to their own specialty, is responsible for one or two projects independently set teaching way, all the projects of the teacher a teaching cooperative, teaching methods of the Cooperative in each project can be different, way since the fitting, the cooperative work together to complete a course teaching. In 2019, Jinglin, G., (2019) discussed the Cooperative learning model focusing on the leading role of teachers in teaching, reflecting the dominant position of students, focusing on target design research and mobilization of student resources, student group activities as the basis, through promoting the efficient operation of student learning groups to create an efficient classroom with teacher-student interaction and student-student interaction. (Tingqi, M., 2007) elaborated on cooperative learning from the perspective of the task needs of the development of colleges and universities, and believed that cooperative learning is a group of teachers who take responsibility for each other in order to achieve the common goal of teaching reform, with the main task of improving teaching quality and effect and promoting teaching reform.

Conclusion: Cooperative learning is centered around small groups of students, gives full play to students' initiative, and improves students' learning experience. Combined with the instructional model





of Cooperative learning, improve the teaching quality of teachers; Teachers build their own lessons, manage their own lessons, participate in the interaction, focus on students' Cooperative work spirit; Cultivate students' autonomous learning ability.

This research integrates blended and cooperative learning models together and derived the blended cooperative learning model which consisted of four steps of teaching:

**Step1 Instructional analysis/Preview**

Teacher: Prepare and publish new course guide plans, design scenarios, tests or cases, PPT, and other relevant materials.

Student: Preview the textbook in the classroom for 10 minutes.

**Step2 Classroom Instruction**

**2.1 Grouping**

There are 30 students in this class. They are divided into 5 groups with 6 students in each group.

**2.2 Assign tasks**

Teachers assign tasks to each group, which can be the same or different, but the tasks should be the same as far as possible.

**2.3 Group cooperative learning**

Cooperative learning of teaching content between teachers and students

**2.4 Show the results of cooperative learning**

Teacher: The teacher guides and organizes group representatives to demonstrate learning results

Student: Each group sent representatives to present and share the results of their discussions on outlook on life after studying four cases.

**Step 3 Evaluation**

**3.1 Formative evaluation (evaluate show the results)**

**3.2 Summative evaluation (achievement test)**

**Step 4 Assign homework**

According to the above problems in the ideological and moral education course for college students, this study integrated the advantages of the blended learning model and cooperative learning model in mobilizing the learning enthusiasm and interest of college students and adopted the blended cooperative learning model to improve the academic performance and expected characteristic behavior of college students (Weina, Q., 2010).

**Objectives**

This research objectives were: (1) to compare the learning achievement of college students before and after learning through the Blended cooperative learning instructional model. And (2) to compare the desired characteristic behaviors of college students after learning through the Blended cooperative learning instructional model with a criterion set at 65%.

**Hypotheses**

The research's hypotheses of statistical testing were as follows;

1. The learning achievement in the Ideological and moral education course of college students after learning through the Blended cooperative learning instructional model is higher than before.

2. The desired characteristic behaviors in the Ideological and moral education course of college students after learning through the Blended cooperative learning instructional model are higher than the criterion set at 65%.

**Conceptual Framework**

This research was designed the conceptual framework as follows;

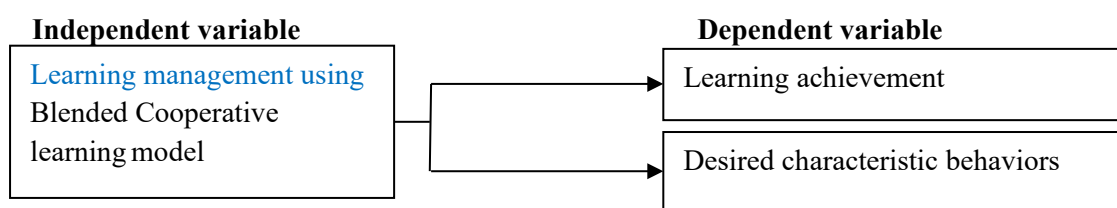


Figure 1: Research Conceptual Framework





## Methodology

**Population and sample:** The population in this study was 500 year 1 student of ideological and moral education course major student in Zhoukou Vocational and Technical College, Chuanhui District, Zhoukou City, Henan Province, China. The sample in this study was 30 year 1 student of ideological and moral education course major student in Zhoukou Vocational and Technical College, Zhoukou City, Henan Province, selected through cluster random sampling method.

**Research instruments:** Research instruments were the tools for researching to collect data. The research instruments which were used in this study were:

### 1. Experimental instruments

*1.1. Blended cooperative learning instructional model:* The instructional model of this research was blended cooperative learning. There are four steps of teaching: 1) Instructional analysis/Preview. Teacher: Prepare and publish new course guide plans, design scenarios, tests or cases, PPT, and other relevant materials. Student: Preview the textbook in the classroom for 10 minutes. 2) Classroom Instruction, 2.1 Grouping 2.2 Assign tasks 2.3 Group 2.4 Show the results of cooperative learning 3) Evaluation 3.1 Formative evaluation (evaluate show the results) 3.2 Summative evaluation (achievement test) 4) Assign homework. Five experts evaluated the instructional model. The Index of Item Objective Congruence (IOC) of each component of the blended cooperative learning instructional model showed from 0.87 to 1 was higher than 0.5 and could be used in the evaluation blended cooperative learning instructional model.

*1.2. Lesson plans:* Five experts evaluated the six lesson plans. The evaluation form of the lesson plan was established using the IOC method. According to the expert evaluation, the scores of the six lesson plans were in a range of 0.6-1. Therefore, the six lesson plans of the blended cooperative learning instructional model were applicable to the teaching of the year 1 students of the ideological and moral education course major in Zhoukou Vocational and Technical College for improving their learning achievement and desired characteristic behaviors.

2. Instruments for collecting data: Instruments for collecting data consisted of three instruments as follows:

*2.1. Test paper on learning achievement:* The test paper had a total of 30 items (Single choice), and covered 4 levels, including remember, understand, application, and analysis. The Index of Item Objective Congruence (IOC) value of 30 items was 0.6-1., which showed that all test items were appropriate and could be used in the test. The difficulty of test items ( $p=0.39$ ) was between 0.2-0.8, the discriminability ( $r=0.57$ ) was higher than 0.2, and the reliability was 0.85 higher than 0.7. This showed that the quality of the test paper was good.

*2.2. Students' self-assessment form about desired characteristic behaviors:* Five experts evaluated 31 items about students' self-assessment form, the Index of Item Objective Congruence (IOC) was between 0.60-1.00, which showed that 31 items in students' self-assessment form was appropriate and could be used in the evaluation of blended cooperative learning instructional model.

*3. Teacher observation form about desired characteristic behaviors:* Five experts evaluated 12 items about teacher observation form, the Index of Item Objective Congruence (IOC) was between 0.60-1.00, the result of analyzing the IOC index showed that 12 items in teacher observation form were appropriate and could be used in the evaluation of blended cooperative learning instructional model.

**Data collection:** Data collection was as follows: First, the sample was given the learning achievement pre-test using a test paper constructed by the researcher. Second, the sample was taught using the blended cooperative learning instructional model based on the Ideological and moral education course. Then the sample was given the learning achievement post-test using the same instrument which was used in the pre-test, and assessed students' desired characteristic behaviors using students' self-assessment and teacher observation forms.

**Data analysis:** According to the research objectives, statistical methods were used to analyze the data. (1) The dependent sample t-test was used to compare the test scores of Ideological and moral education courses based on blended cooperative learning before and after teaching. And (2) The one-sample t-test was used to compare the students' desired characteristic behaviors with a criterion set at 65%.





## Procedural Framework

Phase/System	Input	Process	Output
Phase 1 The background information focus on instructional strategy and the significance of problems	The background information focuses on the instructional strategy of college students' ideological and moral education instructional model, 1.1 Current situation of ideological and moral education modeling course 1.2 Problems existing in the teaching process. 1.3 Instructional model components 1.4 Learning achievement and Desired characteristic behaviors	Study background information in the aspects of: 1.1 current situation of ideological and moral education modeling course that the researcher is using. 1.2 problems through documents of the teaching process. 1.3 Instructional model components 1.4 Learning achievement and Desired characteristic behaviors	This study has the following problems: 1. instructional strategy problems 2. Instructional model components 3. Learning achievement theory 4. Desired characteristic behaviors components 5. Learning theory
Phase 2 Develop an instructional model	2.1 Blended cooperative learning model to improve student's learning achievement and desired characteristic behaviors 2.2 Research instruments: 2.2.1 Learning achievement 2.2.2 Desired characteristic behaviors	2.1 Develop a blended cooperative learning model to improve student's learning achievement and desired characteristic behaviors 2.2 Construct research instruments: 2.2.1 Learning achievement 2.2.2 Desired characteristic behaviors	2.1 The components of the blended cooperative learning model: 1. principles 2. objectives 3. contents 4. instructional strategies: steps of teaching 5. media and resources 6. measurement and evaluation 2.2 Research instruments for: 2.2.1 Learning achievement test 2.2.2 Desired characteristic behaviors self-assessment
Phase 3 Instructional model implementation	3.1 Blended Cooperative learning model 3.2 Research instruments	3.1 Blended Cooperative learning model is implemented in the teaching process 3.2 Using Research instruments to evaluate learning achievement	3.1 Learning achievement 3.2 Desired characteristic behaviors





Phase/System	Input	Process	Output
		and desired characteristic behaviors	

## Results

According to the research objectives, the results were as follows:

1. Result of comparing learning achievement of the students before and after receiving Ideological and moral education courses based on blended cooperative learning by using t-test for dependent sample.

Table 1 Paired sample test about learning achievement

Score	Full score	Mean	N	SD	t	Sig
Pre-test	30	16.13	30	3.25	9.58*	0.000
Post-test	30	19.93	30	2.75		

\* The significance level was 0.05.

From Table 1, the mean score on the pre-test was 16.13 points and the mean score post-test was 19.93 points, it was 3.8 higher than the pre-test,  $t=9.58$ ,  $p=0.000 < 0.05$ , indicating that students' learning achievement has been greatly improved after the blended cooperative learning teaching model was adopted in ideological and moral education course.

2. Data analysis result of students' self-assessment and teacher observation form about students' desired characteristic behaviors

The researcher used the students' self-assessment form to conduct a survey on the year 1 Ideological and moral education students of Zhoukou Vocational and Technical College, and randomly selected 30 students as a sample. The data analysis was presented in the table below.

Table 2 Paired sample students' self-assessment about desired characteristic behaviors

Group	N	Full score	Criterion score	Self-assessment Posttest scores		t	p
				M	SD		
Experimental group	30	155	100.75	106.77	6.20	94.30*	0.000

\* The significance level was 0.05.

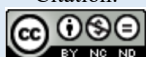
As presented in Table 2, showed the results of the Self-assessment mean scores of 30 students' desired characteristic behaviors after learning through the blended cooperative learning model was 106.77 from full marks of 155 and the standard deviation was 6.20 which was statistically higher than the criterion of 65% at 0.05 level of statistical significance ( $t=94.30$ ,  $p=0.000 < 0.05$ ).

The researcher used the teacher observation form to conduct a survey on the year 1 Ideological and moral education students of Zhoukou Vocational and Technical College, and randomly selected 30 students as a sample. The data analysis was presented in the table below.

Table 3 Paired sample teacher observation about desired characteristic behaviors

Group	N	Full score	Criterion score	Self-assessment Posttest scores		t	p
				M	SD		
Experimental group	30	60	39	44.57	4.16	7.33*	0.000

\* The significance level was 0.05.





As presented in Table 3, showed the results of the observation form mean scores of 30 students' desired characteristic behaviors after learning through the blended cooperative learning instructional model was 44.57 from full marks of 60 and the standard deviation was 4.16 which was statistically higher than the criterion of 65% at 0.05 level of statistical significance ( $t=7.33, p=0.000<0.05$ ). According to the research results, we can draw the following conclusions: It was concluded that the learning achievement and desired characteristic behaviors of the year 1 student in Zhoukou Vocational and Technical College who was taught by using blended cooperative learning was higher than before.

## Conclusion

Through comparative analysis of learning achievement and desired characteristic behaviors scores before and after learning through the blended cooperative learning model in the Ideological and moral education course of first-year students in Zhoukou Vocational and Technical College, revealed that students' learning achievement and desired characteristic behaviors have been significantly improved. Therefore, it is feasible to adopt a blended cooperative learning instruction model, which is helpful to improve the learning achievement and desired characteristic behaviors of the first-year students at Zhoukou Vocational and Technical College.

## Discussion

1. The result of comparison of learning achievement scores before and after learning through blended cooperative learning. The findings showed that mean scores of learning achievement after learning through blended cooperative learning were higher than that of the pretest at the .05 level of significance which means that the students who were taught using the blended cooperative learning instructional model had higher learning achievement than before. The results of this study were consistent with the study of Khujun, A., (2002), which found that the students who had been taught using the blended cooperative learning instructional activities had better learning achievement and were consistent with the study of Nittaya Yonwichai (2002) and Hongchuta, J., (2002). This was because the instructional activities had been developed and organized the students worked together in blended groups disregarding their learning ability, allowing them to learn cooperatively and to participate in various activities. This approach would enable students to participate in the activities physically, intellectually, emotionally, and socially, while the teacher acted as a facilitator or advisor. This was consistent with the study of Junburom, J., (2002) which indicated that teachers' role in the blended cooperative learning classroom was an important factor to promote students' learning.

2. The results of the comparison of scores of desired characteristic behaviors after learning through blended cooperative learning. The results showed that the post-test scores of desired characteristic behaviors were higher than the criterion set at 65%, with a significance level of .05, indicating that the desired characteristic behaviors of the students who adopted the blended cooperative learning model were higher than 65% of full marks. The results of this study were consistent with the study of Jingru, Z., (2021), who found that College students should not only learn knowledge but also strengthen their education on social responsibility. Let the students take part in more social activities and learn more about the world's advanced culture. This is consistent with the research of Chenghui, Y., (2013) who studied college students' self-management and found that students should be responsible for their own behavior, the key factor to improve the self-management of college students also lies in their own attention and efforts. They should have the consciousness of continuous progress, self-restraint, and regulation. On this basis, they should know how to establish goals and control themselves. This finding was consistent with the study of Yiyang, L., (2020), who studied self-discipline, by giving training to college students on self-discipline and found that the training could shape the behavior habits that help them face up to their own values in future studies and work.

## Recommendations

1. The blended cooperative learning instructional model has a profound influence on the course of ideological and moral education. Many teachers still adopt the teacher-centered teaching method in the course of ideological and moral education. Therefore, education management departments should strengthen the training of teachers of ideological and moral education courses in colleges and universities, so that more teachers of ideological and moral education courses should adopt the blended cooperative learning instructional model in the course of ideological and moral education.

2. With the advent of the information age, students can get knowledge and information more easily through the Internet. In the blended cooperative learning instructional model, teachers should guide students to use network means, such as the digital library, and open paper database (such as spring





database, China Knowledge Infrastructure paper database, etc.), so that students can get the latest teaching content.

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