The Effect of Team-based Learning Activity on College Students' Character Education

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팀 기반 학습활동이 대학생의 인성교육에 미치는 영향

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Abstract The purpose of this study is to provide a solution through a methodological approach so that character education can be naturally acquired in team-based learning activities. In the spring semester of 2021, a total of 69 college students in two groups were studied, and as a result of the study, the total score of character education virtues in the post-test was greatly improved in the experimental group (p<.001). The correlation between sub-items of team-based learning and pre and post-test results for character sub-items, self-regulation, consideration, communication, self-esteem, and responsibility, were statistically significant. This study shows character education through team-based learning had positive results. However, future research through a wider range of subjects is needed, and various teaching methods are being applied to propose verification of the effectiveness of character education.

Key Words : Team-based learning, Character education, Character virtue, Self-regulation, Communication, Self-esteem

요 약 본 연구의 목적은 팀 기반 학습활동에서 인성교육이 자연스럽게 습득될 수 있도록 방법론적 접근을 통한 해결책을 제공하는 것이다. 2021년 봄 학기에 두 그룹 총 69명의 대학생을 대상으로 실험반은 교양영어 프로그램과 팀 기반 학습활동을 융합하여 강의를 진행하였고 통제반은 교양영어 프로그램에 맞춘 강의중심 수업을 실시하여 팀 활동이 인성교육 덕목에 영향을 줄 수 있는지를 연구하였다. 연구 결과, 실험반(p<.001)의 사후 테스트 결과에서 인성덕목 총점이 크게 향상되었다. 팀 기반 학습의 하위 항목인 리더십, 신뢰도, (과제)수행 및 책임감 간 상호 밀접하게 상관관계가 있었으며 인성교육의 하위 항목인 자기조절, 배려, 소통, 자존감, 책임감에 대한 사전 및 사후 테스트 결과 통계적으로 유의미한 것으로 나타났다. 따라서 강의중심 수업보다는 학생들이 직접 참여한 팀 활동을 통한 수업은 인성교육에 효과적인 영향을 주었다. 다만, 현 연구는 모수가 제한적이기 때문에 보다 확장적인 심층 연구가 필요하며, 향후 다양한 교수법이 적용된 인성교육의 효과성에 대한 검증이 이루어졌으면 한다.

주제어 : 팀 기반 학습활동, 인성교육, 인성덕목, 자기조절, 소통, 자존감

1. Introduction

Due to the constant competition along with the rapid social change of industrialization, people living in the modern society suffer from social problems as a breakdown of the sense of community[1]. Therefore,negative phenomena such as lack of consideration, lack of empathy,

and lack of communication due to lack of character are appearing [2]. The key focus required for education in the 21st century are creativity, convergence, communication, and personality[3]. In addition, the character aspect that enables the talents who will lead the future society to unfold their abilities in a desirable direction is emphasized[4]. What is character? In the Standard Korean Dictionary, character is defined as "person's personality" and "the characteristics of each individual's thoughts, attitudes, and behaviors"[5]. The term, character can be used in various ways depending on the context and perspective in which the term is used. Recent studies have focused on character as a desirable disposition required in modern society, away from a specific point of view[6]. In other words, character education is broadly defined as education to cultivate a desirable human image by reinforcing cognitive, emotional, and behavioral factors. In the case of character education, a wide range of social and moral experiences are required to complete an individual's personality, and the experiences of college students who step into society as adults are recognized as very important[6]. This is because, perhaps, in Korean society, there was a widespread misconception that so-called 'good character' would be nurtured by itself as long as the set curriculum was faithfully implemented. However, it was a definite result that the right character was not developed by itself in materialism and selfishness were prevalent and excessive competition was induced[7]. Therefore, in order to solve these problems, it is necessary to recognize the needs of character education in universities and prepare a plan to effectively operate it. Recently, some universities made a special course named 'Character education', but I think it would be more effective if it is introduced naturally in all courses rather than as one specific course. Incorporating character education into each course, school, and curriculum as a whole, and for this, the efforts of all people involved in education are required.

In order to present desirable character education, it is necessary to devise a way to naturally nurture the character of learners through the curriculum, school environment, and subject classes[8][9]. Then, how do we make character education melt naturally through classes in all subjects? What I want to propose is a method of developing character education within the teaching activity. Team-based learning is one of them. Recently, team-based learning (TBL) is drawing attention as an educational method that improves the core competencies of learners required by the times while at the same time participating in learning to provide students with self-directed and active learning[10]. Team-based learning is a teaching and learning method in which members achieve results by efficient communication and interaction for the common goals while learners participate in the learning process, consisting of three stages: pre-learning, preparation, and application of learning content[11]. Factors affecting the effectiveness of team activities are reported as leadership, problem-solving ability, trust, and so on[12]. In team-based classes, team effectiveness appears through team learning or activity processes, and ultimately the level of achievement achieved by the team can be seen[13].

Looking at these preceding studies, it is worth the research to verify the effectiveness of character education of college students through team-based learning. It can also serve as the basis for inducing successful team learning and creating effective learning strategies. The specific research problems proposed in this

study are as follows.

1) Does team-based class affect character education in general English courses?
2) Is there a correlation between leadership, trust, performance, and responsibility in team-based learning?
3) What are the results of the pre and post-test in the sub-items of character virtues?

2. Materials and Method

2.1 Subjects

There are 69 students who took a general English course as their elective one from March 2nd to June 25th, 2021. As a result of the preliminary test of the total score of character virtues, the experimental group and the control group did not have a statistically significant difference, so the two groups can be regarded as homogeneous groups.

Table 1. Pre-character test results

	Group	N	M	SD	T
Character test	Experimental	35	3.77	.545	-.832
	Control	34	3.82	.612	

*p⟨.05 **p⟨.01 ***p⟨.001

2.2 Procedures

The purpose of this study is to analyze the effect on character education of college students through team-based class activities. Classes based on team-based learning were operated twice a week for a total of 10 weeks, 75 minutes each. The class proceeded as follows.

The purpose, method, and evaluation procedure of team-based learning were explained, and the team was formed to have 4 to 5 students per team based on individual competencies such as interest, leadership, and presentation ability in the course. For the experimental group, classes consist of pre-learning, preparation, and application of learning content. In pre-learning, students learned the theoretical parts necessary for the main class through a video created by the professor in charge. Materials for the discussion activities in the main class were given as assignments in advance during the pre-learning time so that students could prepare themselves for the discussion activities. Finally, students' discussion and presentation activities were done under the guidance of the professor in the main classes. In the application of learning content, discussions between teams were conducted through presentations by the group. In order to prevent the free-riding of team learning and to ensure that the rewards of hard work are not in vain, peer evaluation was conducted every two weeks. In the reflection activity, the goal was to reconstruct the learned knowledge, self-esteem, accept other people's opinions, trust, consideration, concession, and improve learning motivation.

Table 2. Contents of Team-based Class Activitie

Procedure	Class Activity
Preparation	Video class Individual assignments Preparation for the main course
Application & Problem solving	Presenting assignments Team problem solving Presentation by team Peer evaluation
Wrap-up	Reflection
Notice (For next class)	Notice

The control group operated a general curriculum according to the existing curriculum lesson plan. However, both groups performed pre and post character tests.

2.3 Instrument and Data Analysis

In order to investigate the effect of team-based learning on students' characters, a questionnaire was conducted on the experimental group, and to supplement the limitations of quantitative research, workbooks and class impressions were used as qualitative

data. The control group did not collect quantitative data but only a questionnaire was surveyed. The character questionnaire consisted of a total of five virtues: self-regulation, consideration, communication, self-esteem, and responsibility. The number of questions in each area consists of a total of 20 items, four for each category.

The research tool used in this study was modified and supplemented to suit the level of college students. This test paper consists of a Likert 5-point scale ranging from 1-point "not at all" to 5-point "very much" for each question, and the higher the score, the higher the level of awareness of learners in each area. At the end of the semester, the post-test was conducted through the same test paper as the pre-test. As a result of measuring the reliability of the items, it was found that Cronbach's α was .89, indicating reliability. The data collected in this study were conducted using t-test, and then the difference in character virtue factor perception between the experimental group and the control group was analyzed. The correlation between team leadership, team trust, team performance, and responsibility was analyzed by Pearson correlation. The SPSS (V. 21) program was used for statistical processing of research data.

Table 3. Reliability

Items	Question No.	Cronbach's α
Leadership	2, 6, 9, 18,19	.69
Trust.	3. 7, 10, 14, 16	.68
Performance	4. 8. 10, 11, 13	.75
Responsibility,	1, 5 12, 15, 17	.62
Total	20	.89

3. Results

3.1 Pre and Post Character Test Result

This study approached under the assumption that team-based classroom activities have a positive effect on character education in general

curriculum learning.

Table 4. Pre and Post Character Test Results

	Test	Group	N	M	SD	T
Character test	Pre	Experimental	35	3.77	.545	-.832
		Control	34	3.82	.612	
	Post	Experimental	35	4.43	.464	7.165***
		Control	34	3.85	.578	

*p<.05 **p<.01 ***p<.001

Looking at the results of the pre and post-test of the total score of character virtues (Table 4), there was no statistically significant difference between the experimental group and the control group in the pretest, but in the post-test, it can be seen that the total score of the character virtues factors improved significantly in the experimental group (p<.001). It suggests that team-based activities can be one of the effective ways to positively change the perception of character virtues among college students.

3.2 The Correlation between the Factors in Team-based Learning

Table 5 shows the correlation between leadership, trust, performance, and responsibility in team-based learning.

Table 5. The Correlation

Variables	Leadership r(p)	Trust r(p)	Performance r(p)	Responsibility r(p)
Leadership	1			
Trust	.727*(000)	1		
Performance	.6651*(000)	.544*(000)	1	
Responsibility	.677*(000)	.645*(000)	.732*(000)	1

*p<.001

As a result of correlation analysis, team performance was significantly correlated with leadership (r=.665, p<.001), trust(r=.544, p<.001), and responsibility (r=.732, p<.001). and responsibility was significantly correlated with leadership (r=.677, p<.001) and trust (r=.645, p<.001). Also, there was a significant correlation between leadership and trust (r=.727, p<.001).

3.3 The Results of the Pre and Post-test in the Sub-items of Character Virtues

After conducting character education through the classes using team-based learning, a pre and post independent sample t-test was done to find out the effect on the sub-items of character virtue. The results of the pre and post-test of self-regulation, consideration, communication, self-esteem, and responsibility, which are sub-items of character, are as follows.

The post-test results of the self-regulation domain (Table 6) show that the experimental group was 4.42 and the control group was 3.62, indicating that the self-regulation domain of the experimental group was statistically significantly higher ($p<.001$).

Table 6. Post-test Result of the Self-regulation

	Test	Group	*N*	*M*	*SD*	*T*
Self-regulation	Pre	Experimental	35	3.57	.745	-1.328
		Control	34	3.72	.712	
	Post	Experimental	35	4.42	.564	6.165***
		Control	34	3.62	.878	

*$p<.05$ **$p<.01$ ***$p<.001$

The post-test results of the consideration domain (Table 7) show that the experimental group was 4.32 and the control group was 3.72, indicating that the consideration domain of the experimental group was statistically significantly higher ($p<.001$).

Table 7. Post-test Result of the Consideration

	Test	Group	*N*	*M*	*SD*	*T*
Consideration	Pre	Experimental	35	3.61	.645	-.988
		Control	34	3.74	.702	
	Post	Experimental	35	4.32	.604	6.101***
		Control	34	3.72	.656	

*$p<.05$ **$p<.01$ ***$p<.001$

As shown in Table 8, in the post-test results of the communication domain, the experimental group was 4.35 and the control group was 3.70, indicating that the results of the experimental group were statistically significantly high ($p<.001$).

Table 8. Post-test Result of the Communication

	Test	Group	*N*	*M*	*SD*	*T*
Communication	Pre	Experimental	35	3.61	.628	-1.588
		Control	34	3.74	.712	
	Post	Experimental	35	4.35	.564	6.431***
		Control	34	3.70	.651	

*$p<.05$ **$p<.01$ ***$p<.001$

Looking at the post results of the self-esteem area in Table 9, the experimental group was 4.59 and the control group was 3.98, which was statistically significantly higher ($p<.001$).

Table 9. Post-test Result of the Self-esteem

	Test	Group	*N*	*M*	*SD*	*T*
Self-esteem	Pre	Experimental	35	4.03	.628	-2.68
		Control	34	4.02	.712	
	Post	Experimental	35	4.59	.564	4.848***
		Control	34	3.98	.801	

*$p<.05$ **$p<.01$ ***$p<.001$

According to the post results in the responsibility area of Table 10, the experimental group was 4.42, and the control group was 3.79 ($p<.001$). The result of the experimental group was statistically significant.

Table 10. Post-test Result of the Responsibility

	Test	Group	*N*	*M*	*SD*	*T*
Responsibility	Pre	Experimental	35	3.73	.736	-1.563
		Control	34	3.92	.762	
	Post	Experimental	35	4.42	.564	6.084***
		Control	34	3.79	.691	

*$p<.05$ **$p<.01$ ***$p<.001$

4. Conclusion and Discussion

The purpose of this study is to allow character education to naturally melt into team-based learning to solve methodological problems while social demands and importance for character education are growing. The reason for using team-based learning activities in

character education is that the sub-items appearing in team activities are somewhat similar to the sub-items of character education, and it is easy and broad to understand not only in class but also in real life.

As seen in the results of the study, in the post-test, it can be seen that the total score of the character virtues factors improved significantly in the experimental group ($p < .001$). The results of correlation analysis between leadership, trust, performance, and responsibility in team-based learning were also found to be correlated with each other. As a result of the pre and post-test on self-regulation, consideration, communication, self-esteem, and responsibility, which are sub-items of character, the post-test results were found to be statistically significant in all items.

The results of this study suggest that through team-based learning activities that require leadership, trust, performance, and responsibility, personality virtues such as self-regulation, consideration, communication, self-esteem, and responsibility can be taught naturally in university character education. Therefore, rather than lecture-centered classes, classes through team activities in which students directly participated had an effective effect on character education.

Since the current study has a limited number of parameters, more extensive and in-depth research is needed, and it is hoped that the effectiveness of character education applied with various teaching methods will be verified in the future.

REFERENCES

[1] S. L. Peng, B. L. Cherng, & H. C Chen. (2013). The effects of classroom goal structures on creativity of junior high school students. *Educational Psychology, 33(5),* 540-560. DOI : 10.1080/01443410.2013.812616

[2] S. K. Lee. (2017). Exploring the Educational Implications and Practical Action Plans of Social Emotional Learning to Improve Adolescents' Subjective Well-being. *Korean Association For Learner-Centered Curriculum And Instruction, 17(19),* 585-609. DOI : 10.22251/jlcci.2017.17.19.585

[3] E. C. Hwang. (2020). Technology Innovation, Decentralization and Creativity in the Era of the 4th Industrial Revolution. *Journal of the Korea Society of Computer and Information, 25(11),* 229-38. DOI : 10.9708/jksci.2020.25.11.229.

[4] T. G. Cho. (2021). An Analysis of Research Trends and Implications for Character Education in Special Education. *Journal of Character Education & Research, 2(1),* 1-22. DOI : 10.46227/JCER.6.1.

[5] National Institute of the Korean Language Standard Korean Dictionary. (2017) http://stdweb2.korean.go.kr/search/List_dic.jsp

[6] J. H. Shin. (2020). Exploration of the Concept of 'Character Gifted Person' and Educational Principle. *Journal of Character Education and Research, 5(2),* 43-66. DOI : 10.46227/jcer.5.2.3

[7] S. Y. Cheon, I. H. J, & S. Kim. (2016). An Essay About the Possibility of Humanity Education Based on Empathy. *CNU Research Institute of Education, 36(3),* 221-244. DOI : 10.18612/cnujes.2015.36.3.221

[8] S. Kim. (2015). Key Approaches in Character Education. *The Journal of Curriculum Studies. 33(2),* 207-229. DOI : 10.15708/kscs.33.2.201506.009

[9] J. Y. Lee. (2014). Practical understanding about character education through art: character education centered movie making practice. *Journal of Art Education, 38,* 135-159. DOI : 10.35657/jae.2014.38.0.006

[10] J. R. Han. (2016). The Effects of Shared Leadership on Team Performance and Team Commitment of Team-Based Learning in Nursing Students: Mediating Effects of Team Trust. *Journal of Digital Convergence, 14(12),* 303-311. DOI : 10.14400/jdc.2016.14.12.303

[11] L. K. Michaelsen & M. Sweet. (2008). The essential elements of team-based learning. *New Directions for Teaching and Learning, 116,* 7-27. DOI : 10.1002/tl.330

[12] M. Z. Bruhn & C. Gibson. (2006). Multinational organization context: Implications for team learning and performance. *Academy of Management Journal*, *49*, 501-518. DOI : 10.5465/amj.2006.21794668

[13] S. G. Cohen & D. E. Bailey. (1997). What makes teams work: Group effectiveness research from the shop floor to the executive suite. *Journal of Management, 23(3)*, 239-290. DOI : 10.1177/014920639702300303

[14] B. L. Kirkman & B. Rosen. (1999), Beyond Self-management: Antecedents and Consequences of Team Empowerment. *Academy of Management Journal*, *42(1)*, 58-74. DOI : 10.1108/02621710210420273

[15] S. Lim, H, Ju & M. Y. Han (2015). Development and Validation of Primary and Secondary School Students' Character Test. *The Korean Journal of Counseling and Psychotherapy, 29(1)*, 83-106. DOI : 10.21193/kjspp.2015.29.1.005

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