

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/298396407>

# Interaction Between the Type of School and Learning Outcomes in Student's Soft Skills Enhancement through Cooperative...

Article in *Procedia - Social and Behavioral Sciences* · May 2016

DOI: 10.1016/j.sbspro.2016.05.078

CITATIONS

0

READS

49

3 authors, including:



**Nugraha Nugraha**

Universitas Pendidikan Indonesia

13 PUBLICATIONS 0 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Keuangan Daerah [View project](#)



MOTIVASI BERPRESTASI DAN KOMPETENSI GURU [View project](#)

3rd Global Conference on Business and Social Science-2015, GCBSS-2015, 16-17 December  
2015, Kuala Lumpur, Malaysia

## Interaction between the Type of School and Learning Outcomes in Student's Soft Skills Enhancement through Cooperative Learning Model (Quasi Experiment on Vocational Students in Bandung)

Nugraha<sup>a\*</sup>, Imas Purnamasari<sup>b</sup>, Heraeni Tanuatmodjo<sup>c\*</sup>

<sup>a</sup> *Indonesia University of Education, Jl. Dr Setiabudhi 229, 40154, Bandung, Indonesia*

<sup>b</sup> *Indonesia University of Education, Jl. Dr Setiabudhi 229, 40154, Bandung, Indonesia*

<sup>c</sup> *Indonesia University of Education, Jl. Dr Setiabudhi 229, 40154, Bandung, Indonesia*

---

### Abstract

The purpose of this study was to measure the interaction between the type of school and learning outcomes in improving the soft skills of students through cooperative learning in vocational students in Bandung. The study was conducted through quasi experiments on three types of vocational schools, namely Public Vocational School with "A" Grade, Private Vocational with "A" Grade and Private Vocational other than "A" Grade. The study involved 240 students in six classes of observation. Data were analyzed using factorial design (2 x 3 x 3) with three ways ANOVA models. Results showed that the first, there is no interaction between cooperative learning and types of schools to increase students' soft skills. Secondly, there is no interaction between the cooperative learning and learning outcomes to increase students' soft skills. Third, there is an interaction between type of school and student learning outcomes to increase students' soft skills. Fourth, there is an interaction between cooperative learning, types of schools and learning outcomes to increase students' soft skills.

© 2016 The Authors. Published by Elsevier Ltd.

Peer-review under responsibility of the Organizing Committee of the 3rd GCBSS-2015.

**Keywords:** Innovation; Marketing Performance; Womenpreneur; Fashion; Creative industry

---

\* Corresponding author. Tel.: +62-811-228-636

E-mail address: [nugraha@upi.edu](mailto:nugraha@upi.edu)

## 1. Introduction

The excellent human resources are those who not only have the ability of hard skills, but also have the ability of soft skills. According to a study at Harvard University in the United States, that a person's success is not determined solely by the knowledge and technical abilities (hard skills), but rather by the ability to manage yourself and others (soft skills). This study revealed that success is determined only approximately 20% by the hard skills and the remaining 80% by the soft skills.

In Indonesia, the learning process has been more emphasis on the ability of the hard skills. However, in line with the development of knowledge, the education system in Indonesia began to see that the student needs to have the ability of soft skills. Therefore, in the process of education in Indonesia needs to be developed learning model that is able to encourage and improve the soft skills of students. Department of Education, Science and Training, Australia (2006) say that Generic skills are non-technical skills, which play a significant in contributing to individual's effective and successful participation in the work place.

Researches on soft skills have been carried out. Robert Hall (2009: 1) in a study mentioned other than hard skills, soft skills have a strategic role in determining a person's success in all areas of work. Hard skills development aspects concerning the control of field work (technical skills) needs to be balanced with the integration aspects of soft skills such as communication, emotional intelligence, teamwork and leadership. Moreover, according to Goleman, it is determined the cause of the success of a 20% by intellectual intelligence, and 80% by other support, including emotional intelligence (Ghozally, 2005). Sudiana study (2011) showed that the implementation of cooperative learning model can improve soft skills of students, improve students' learning activities, and improve student results. Stahl (1992) in his study in the USA found that the use of cooperative learning models can encourage the growth of solidarity. Previous studies by Ballantine & Larres (2007) and Awang (2006) show an improvement of generic skills among students when cooperative learning is incorporated in their lesson. Biggs (1999) in previous studies has shown the weakness in this type of teaching and learning, and thus there is a need to vary the lecture activities by engaging the students in activities.

Based on previous studies, the researchers are interested in conducting research on the same theme, in accordance with the condition of education in Indonesia. In the process of education in Indonesia, most educators have the perception that students who have a good competence are those that have high scores. This perception led to educators focus on the conventional learning process (teacher-centered), both in the delivery as well as in the process of assessment. Currently, educators in Indonesia have begun to be more creative and innovative in creating a student-centered learning and to foster the ability of soft skills of students.

Based on observations in several vocational high schools, the ability of the students' soft skills during the learning process has been still low. It can be seen from the activity, cooperation, mutual respect, the ability to ask questions, or answer questions. In this case, there should be efforts to solve problems through the application of a model of student-centered learning. One of the learning activities that can be done is the development model of cooperative learning. This study is limited to the development of Cooperative Model to Improve Students' Soft Skills in terms of school type and student learning outcomes. School types in this study were divided into three, namely: Public Schools with "A" grade, Private Schools with "A" grade, and Private Schools with other than "A" grade. Student learning outcomes were divided into three, namely High, Medium and Low.

The formulation of the problem in the research: Is there an interaction between the learning model and the type of school on the students' soft skills abilities. Whether there is an interaction between the model of learning and student learning outcomes on the students' soft skills abilities. Whether there is an interaction between type of school and student learning outcomes on the students' soft skills abilities. Whether there is an interaction between learning models, types of schools, and learning outcomes on the students' soft skills abilities.

## 2. Theoretical Framework

### 2.1 Cooperative Learning

In cooperative learning, the students are trained to have the ability to soft skills such as respect for the opinion of friends, come forward and speak, able to accept the opinion of friends, capable of cooperating, helping, giving and

receiving the difference between a group of friends. With cooperative learning, students are expected not to only have the ability to be hard skills. Cooperative learning is developed to achieve at least three important learning objectives, as summarized by Ibrahim et al. (2000:7), namely: (a) Academic learning outcomes; (b) Acceptance of individual differences; (c) Development of social skills.

Cooperative learning is a teaching strategy that involves a group of students work collaboratively to achieve a common goal (Eggen and Kauchak, 1996:279). Cooperative Learning is an instructional paradigm, which utilizes small groups so those students work together to maximize their own and each other's learning. The essential components of cooperation are positive interdependence, face-to-face interaction, individual and group accountability, interpersonal and small group skills, and regular self-assessment of team functioning (Johnson et al. 1993). Cooperative learning increases in self-esteem, social acceptance, and teacher ratings of students with disabilities (Putnam et al. 1996). Suprijono (2011:54) suggests that cooperative learning model is a broader concept covering all types of group work, including forms, led by a teacher or directed by the teacher. Meanwhile, Slavin (Isjoni, 2011:15) 'In cooperative learning methods, student work together in four member teams to master material initially presented by teacher'.

According to Solihatin & Raharjo (2008:4), cooperative learning implies an attitude or behavior in work or help among others in the structure of the regular cooperation in groups, consisting of two or more people where employment success is strongly influenced by the involvement of every member of the group itself. Cooperative learning can also be interpreted as a structure common task in an atmosphere of togetherness among members of the group.

From the definition above, it can be concluded that the cooperative learning model is a student-oriented model, where students actively asked each other, respect the opinions of others. Students share the task to the group, which has a mutual aid between high achievement to friends who have low achievement to understand each other and understand what is being studied.

## *2.2 Concept of Soft Skills*

Soft Skill, according to Berthall (Sailah, 2008), is personal and interpersonal behavior that develop and maximize human performance (e.g. coaching, team building, decision-making, initiative). In general, soft skill can be grouped into two categories: intrapersonal and interpersonal skill. Intrapersonal skill encompasses self awareness (self confident, self-assessment, trait & preference, emotional awareness) and self-skill (improvement, self-control, trust, worthiness, time/source management, pro-activity, conscience). Interpersonal skill encompasses social awareness (political awareness, developing others, leveraging diversity, service orientation, empathy and social skill (leadership, influence, communication, conflict management, cooperation, teamwork, and synergy). According to Patrick (Hermawan, 2014) there are seven areas of important soft skills called Winning Characteristics, namely: Communication Skills, Organizational Skills, Leadership, Logic, Effort, Group Skills, and Ethics.

To develop soft skills with learning, planning needs to involve the teachers, students, alumni, and the world of work, to identify the relevant soft skills development. Of course, the identification is not something that is "black and white", but rather an agreement. Assuming all teachers fully understand the "content" that fostered learning and "understand" the concept of soft skills and their components, then charging will take place objectively and carefully. That way, every teacher knows what component of soft skills should be developed when teaching. Soft skills need to be honed can be grouped into six categories: communication skills, organizational skills, leadership, logic and creative, effort, group skills and ethics.

To build the students who have the ability of soft skills, there should not be special subjects on soft skills, but can be integrated during the learning process takes place. One way to be able to integrate must use strategy. Thus, application of learning models is a media liaison, even forming to create a balance between the ability of learning hard skills with soft skills abilities.

### 3. Research Methods

The data analysis uses two techniques: (1) factorial design 2 x 3 with two-ways Anova to test the interaction of all variables; and (2) factorial design 2 x 3 x 3 with three-ways Anova.

Table 1. Data Analysis and Statistical Test of Study

Test Desired	Equivalent $H_0$	Statistical Test
Effect of Interaction of A and B (2 x 3) on Y	$\alpha\beta_{ij} = 0$ for all $i, j$	$\frac{MS_{AB}}{MS_W} \sim F(df_{AB}, df_W)$
Effect of Interaction of A and C (2 x 3) on Y	$\alpha\gamma_{ik} = 0$ for all $i, k$	$\frac{MS_{AC}}{MS_W} \sim F(df_{AC}, df_W)$
Effect of Interaction of B and C (3 x 3) on Y	$\beta\gamma_{jk} = 0$ for all $j, k$	$\frac{MS_{BC}}{MS_W} \sim F(df_{BC}, df_W)$
Effect of Interaction of A, B, C (2 x 3 x 3) on Y	$\alpha\beta\gamma_{ijk} = 0$ for all $i, j, k$	$\frac{MS_{ABC}}{MS_W} \sim F(df_{ABC}, df_W)$

Legend:

A = Cooperatif Learning Method

B = school types

C = students' learning outcome

Y = Student's Soft Skill

### 4. Result and Discussion

#### 4.1 Hypothesis 1

$H_a \mu_{1.\mu 2} \neq \mu_{1.\mu 2}$  : There is interaction between learning model and school types on students' soft skills

The hypothesis testing was used two-ways Anova, where the experiment model used two independent variables. It is called factorial design. Here the factorial design is 2 x 3:

	Conventional Method	Cooperative Method
Public Schools (Grade A)	31,15	57,14
Private Schools (Grade A)	14,54	43,22
Private Schools (Other than Grade A)	25,63	57,80

Tests of Between-Subjects Effects					
Dependent Variable: Student's Soft Skill					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	91844,796 <sup>a</sup>	5	18368,959	39,826	,000
Intercept	521869,350	1	521869,350	1131,471	,000
Model	74728,683	1	74728,683	162,020	,000
School Type	16270,075	2	8135,037	17,638	,000
<b>Model *</b>	<b>575,976</b>	<b>2</b>	<b>287,988</b>	<b>,624</b>	<b>,536</b>
<b>School Type</b>					
Error	164198,135	356	461,231		
Total	807035,000	362			
Corrected Total	256042,931	361			

a. R Squared = ,359 (Adjusted R Squared = ,350)

The above data show that the significance of the main effect interaction is more than 0.05 that means  $H_0$  was accepted and there is no interaction between learning model and school types on students' soft skills.

#### 4.2 Hypothesis 2

$H_a \mu_{1.\mu 3} \neq \mu_{1.\mu 3}$  : There is interaction between model and students' learning outcome on students' soft skills

	Conventional Method	Cooperative Method
High Learning Outcome	34,75	56,39
Medium Learning Outcome	23,28	49,71
Low Learning Outcome	17,14	39,44

Tests of Between-Subjects Effects					
Dependent Variable: Student's Soft Skill					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	89155,141 <sup>a</sup>	5	17831,028	38,037	,000
Intercept	343992,331	1	343992,331	733,794	,000
Model	34972,181	1	34972,181	74,602	,000
Learning Outcome	12739,613	2	6369,807	13,588	,000
<b>Model * Learning Outcome</b>	<b>374,263</b>	<b>2</b>	<b>187,132</b>	<b>,399</b>	<b>,671</b>
Error	166887,790	356	468,786		
Total	807035,000	362			
Corrected Total	256042,931	361			
a. R Squared = ,348 (Adjusted R Squared = ,339)					

The above data show that the significance of the main effect interaction is more than 0.05 that means H0 was accepted and there is no interaction between learning model and learning outcome on students' soft skills.

#### 4.2 Hypothesis 3

Ha  $\mu_{2,\mu 3} \neq \mu_{2,\mu 3}$  : There is no interaction between school types and students' learning outcome on the students' soft skills

	Public Schools (Grade A)	Private Schools (Grade A)	Public Schools (Other than Grade A)
High Learning Outcome	49,91	44,08	58,30
Medium Learning Outcome	36,95	25,29	43,86
Low Learning Outcome	19,69	19,18	25,52

Tests of Between-Subjects Effects					
Dependent Variable: Student's Soft Skill					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	109020,008 <sup>a</sup>	17	6412,942	15,005	,000
Intercept	86860,553	1	86860,553	203,234	,000
Model Pembelajaran	6978,147	1	6978,147	16,327	,000
School Type	4396,228	2	2198,114	5,143	,006
Learning Outcome	4574,758	2	2287,379	5,352	,005
Model * School Type	1277,316	2	638,658	1,494	,226
Model * Learning Outcome	604,720	2	302,360	,707	,494
School Type * Learning Outcome	4258,691	4	1064,673	2,491	,043

The above data show that the significance of the main effect interaction is less than 0.05 (0,043) that means H0 was rejected and H1 was accepted so there is interaction between school type and students' learning outcome on students' soft skills.

#### 4.2 Hypothesis 4

Ha :  $\mu_{1,\mu 2,\mu 3} \neq \mu_{1,\mu 2,\mu 3}$  : There is interaction between learning model, school type and learning outcome on students' soft skills

	High Learning	Middle Learning	Low Learning
--	---------------	-----------------	--------------

		Outcome	Outcome	Outcome
<b>Conventional</b>	Public Schools (Grade A)	61,03	45,07	0,00
	Private Schools (Grade A)	47,46	30,10	42,00
	Private Schools (Other than Grade A)	58,36	57,88	43,00
<b>Cooperative Learning</b>	Public Schools (Grade A)	36,19	14,20	21,00
	Private Schools (Grade A)	4,67	23,29	8,53
	Private Schools (Other than Grade A)	57,00	25,17	24,85

Tests of Between-Subjects Effects					
Dependent Variable: Student's Soft Skill					
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	109020,008 <sup>a</sup>	17	6412,942	15,005	,000
Intercept	86860,553	1	86860,553	203,234	,000
Metode	6978,147	1	6978,147	16,327	,000
School_Type	4396,228	2	2198,114	5,143	,006
Learning_Outcome	4574,758	2	2287,379	5,352	,005
Metode * School_Type	1277,316	2	638,658	1,494	,226
Metode * Learning_Outcome	604,720	2	302,360	,707	,494
School_Type * Learning_Outcome	4258,691	4	1064,673	2,491	,043
Metode * School_Type * Learning_Outcome	6541,753	4	1635,438	3,827	,005
Error	147022,922	344	427,392		
Total	807035,000	362			
Corrected Total	256042,931	361			

a. R Squared = ,426 (Adjusted R Squared = ,397)

The above data show that the significance of the main effect interaction of learning model, school type, and learning outcome is less than 0.05 (0,043) that means  $H_0$  was rejected and  $H_a$  was accepted so there is interaction between learning model, school type, and students' learning outcome on students' soft skills. Because there is an interaction, we conducted a *post hoc* analysis to analyze each category of variables. The *post hoc* analysis shows that the students who used the cooperative learning model, from public school, and have high learning outcome are they who have the highest soft skill improvement, while the students who used conventional learning, from private school (non-grade A) and have low learning outcome are they who have the lowest soft skill improvement.

In the process of learning, the teacher is not only to transfer knowledge to their students only. However, teachers must consider how to develop the students' ability both hard skills abilities and soft skills abilities of students. The ability of students' soft skills if not developed will not grow by itself. To develop the ability of soft skills, students must be stimulated by their environment, whether intentional or not. However, the task of a teacher must intentionally create a learning plan with the aim to develop students' soft skills. With the aim to develop the soft skills of the students, the teacher will make a plan or strategy of learning what might be able to develop the ability of students' soft skills.

Teachers are required to find strategies in order to motivate students to be active during the learning process. Application of learning model is one strategy that can bring the student activity, which is a component of soft skills, making students more active.

Cooperative learning model is the model of social learning that emphasizes the cooperation between students, to make the students participate in learning and make students more active because students act as the main character and the teacher as a facilitator. During the learning takes place, teachers try to explore the capabilities of the soft skills of students by raising all the potential in each student one of them by asking questions, so that students dare to express their opinions, provide the opportunity for other students to discuss with friends, and try to answer the questions well by teachers and students.

In the process of learning, the teacher using cooperative learning model can develop the social skills of students to train and develop soft skills. In the process of learning, the teacher is not only to explain and seek themselves to develop soft skill abilities of students, but they can be with the help of peers, which is when there are exercises can by grouping students in small groups or at the stage of exploration to encourage students to be able to observe ,

analyze, and conduct a question and answer in the group. The division of students into groups is expected to train cooperation among students, each group discussion so that students can be active during the learning process.

Cooperative learning model is an exciting and fun model that provide the opportunity for students to discuss with groups linked material that is not understood and ask it to friends group or to the teacher, participate in groups, cooperate in solving the problem given by the teacher, to train students to dare to express opinions and present the results of the group in front of the class.

This study aims to determine the difference of the soft skills of students before and after the implementation of cooperative learning model in accounting subjects. Cooperative learning model applied by teachers as much as two meetings. Currently, cooperative learning model is applied, researchers act as observer to observe to determine the ability of the soft skills of students.

Before the experiments conducted, the researchers conducted preliminary observations as a pretest to see the ability of the soft skills of students, prior to the implementation of cooperative learning model. Next, we administered a final observation as a posttest at the time of the application of cooperative learning model to determine the ability of the soft skills of students at the time of application of the model using observation sheet.

The hypothesis tests show that: there is no interaction between learning model and school type on the students' soft skills. There is no interaction between the learning model and learning outcome on the students' soft skills. There is interaction between school type and learning outcome on the students' soft skills. There is interaction between learning model, school type and learning outcome on the students' soft skills.

After post hoc test, the interaction between learning model, school type and learning outcome have significant effect on the students' soft skills. The size effect is 43,3%. The research results prove that the implementation of cooperative learning model can improve students' soft skills, which means cooperative learning model affect the ability of students' soft skills. This proves that the one model that can be used to improve students' soft skills that cooperative learning model. This is in accordance with the opinion of Isjoni (2011: 13), "In a cooperative learning, students are actively involved in the learning process so that a positive impact on the quality of interaction and communication quality, can motivate students to improve academic achievement." In line with Goodwin (1999), Kagan (2006), and Jones & Jones (2008), cooperative learning improves social interaction and social skills. This study supports the research of Ahmad and Mahmood (2010) that CL is both enjoyable and effective teaching strategy and it results in significantly higher learning gains and positive learning experience as compared to TI. This study also supports the research of Legewiea and DiPretea (2012) that the school type has relevant effect on students' achievement.

Within the framework of cooperative learning, students learn how to interact with their peers and increase the involvement of the school community. Social skills include communication, build and maintain trust, provide leadership, and managing conflict. The results of this research are in line with previous study by Ballantine & Larres (2007); Awang (2006); that improvement of generic skills among students when cooperative learning is incorporated in their lesson. Biggs (1999) in previous studies has shown the weakness in this type of teaching and learning, and thus there is a need to vary the lecture activities by engaging the students in activities.

## 5. Conclusion

There is no interaction between learning model and school type on the students' soft skills. There is no interaction between the learning model and learning outcome on the students' soft skills. There is interaction between school type and learning outcome on the students' soft skills. There is interaction between learning model, school type and learning outcome on the students' soft skills. The *post hoc* analysis shows that the students who used the cooperative learning model, from public school, and have high learning outcome are they who have the highest soft skill improvement, while the students who used conventional learning, from private school (non-grade A) and have low learning outcome are they who have the lowest soft skill improvement.



## References

- Ahmad, Z. & Mahmood, N. (2010). Effect of Cooperative Learning vs. Traditional Instruction on Prospective Teachers' Learning Experience and Achievement. *Journal of Faculty of Educational Sciences*, Ankara University. 43(1), 151-164.
- Awang, M. (2006). "Cooperative Learning in Reservoir Simulation Classes: Overcoming Disparate Entry Skills. *Journal of Science Education and Technology*. 15 (3). 220-226.
- Ballantine, J. and Larres, P.M.(2007). Cooperative Learning: A Pedagogy to Improve Students' Generic Skills?. *Journal of Education and Training*. 49(2), 127-137.
- Biggs, J., (1999) *Teaching for quality learning*, Philadelphia: SRHE & Open University Press.
- Department of Education, Science and Training (2006). *Employability Skills, From Framework to Practice, An Introductory Guide for Trainers and Assessors*. Developed by Precision Consultancy, Commonwealth of Australia [www.precisionconsultancy.com.au]
- Eggen, Paul D. & Kauchack, D. P. (1996). *Strategies for Teaching* ( 2<sup>nd</sup> ed). Needham Height, Massachussets: Allyn and Bacon
- Ghozally, F.R (2005). *Kecerdasan Emosi dan Kualitas Hidup*. Jakarta: Edsa Mahkota
- Ibrahim, M., Rachmadiarti, F., Nur, M., & Ismono (2000). *Pembelajaran Kooperatif*. Surabaya : University Pers.
- Isjoni.(2011). *Cooperative Learning, Efektifitas Pembelajaran Kelompok*. Bandung : Alfabeta.
- Johnson, D.W., Johnson,R.T. & Holubec, E.J.(1993). *Cooperation in the Classroom* (6<sup>th</sup>ed.). Edina, MN: Interaction Book Company
- Jones, K.A. & Jones, J.L. (2008). Making Cooperative Learning Work in the College Classroom: An Application of the 'Five Pillars' of Cooperative Learning to Post-Secondary Instruction. *The Journal of Effective Teaching*, 8 (2) 61-76.
- Kagan S. (2006). Cooperative Learning: The Power to Transform Race Relation. *Teaching Tolerance*. [http://www.kaganonline.com/free\_articles/dr\_spencer\_kagan]
- Legewiea, J. and DiPretea, T.A. (2012). School Context and the Gender Gap in Educational Achievement. *American Sociological Review*, 77(3) 463–485.
- Putnam, J., Markovchick, K., Johnson, D.W., & Johnson,R.T .(1996).Cooperative learning and peer Acceptance of students with learning disabilities". *The Journal of Social Psychology*, 136 (6), 741-752.
- Sailah I. (2008). *Pengembangan Soft Skills Di Perguruan Tinggi*. Jakarta : Direktorat Jenderal Pendidikan Tinggi
- Sudiana, I Ketut. (2011). *Upaya Pengembangan Soft Skills Melalui Implementasi Model Pembelajaran Kooperatif Untuk Peningkatan Aktivitas dan Hasil Belajar Mahasiswa pada Pembelajaran Kimia Dasar*. Laporan Penelitian PPKP. Singaraja Bali: Universitas Pendidikan Ganesha.
- Solihatn, E & Raharjo. (2008). *Cooperative Learning: Analisis Model Pembelajaran IPS*. Jakarta: PT. Bumi Aksara
- Stahl, Robert J. (1992). Cooperative learning in social study within social class room. *Journal and Social Education*. 10 ( 20). 279-289.
- Suprijono. A. (2011). *Cooperative Learning: Teori & Aplikasi PAIKEM*. Yogyakarta: Pustaka Pelajar.