

# The Effect of Project-Based Learning which Integrates *Tri Kaya Parisudha* Concept and Emulation Ability on Students' Comprehension and Formation of An Entrepreneurial Mindset

N. W. Sukerti<sup>1</sup>, A. Mukhadis<sup>2</sup>, T. M. Kiranawati<sup>3</sup>, H. Suswanto<sup>3</sup>, D. Nurhadi<sup>3</sup>,

<sup>1</sup>Doctoral Student, Universitas Negeri Malang, Indonesia

<sup>2</sup>Full Professor, , Universitas Negeri Malang, Indonesia

<sup>3</sup>Associate Professor, Universitas Negeri Malang, Indonesia

The purpose of this study was to describe the effect of project-based learning with the integration of the *Tri Kaya Parisudha* concept and the emulation ability on students' comprehension, and formation of entrepreneurship mindset in culinary studies. This study used a quasi-experimental design, especially a pretest-posttest nonequivalent control group design. The samples were students of State Vocational High Schools in Bali Province with a total of 12 classes or 412 students, divided into an experimental and a control group. The data were collected with the test of comprehension, emulation ability questionnaire and entrepreneurial mindset questionnaire. The data were then analysed statistically by MANOVA. The results showed that there was a significant difference in the conceptual comprehension and formation of entrepreneurial mindset between the students who were taught by using *Tri Kaya Parisudha* concept and without this concept. The difference was influenced by the learning syntax. Moreover, high emulation ability was superior in comprehension to the concept and entrepreneurial mindset. There was an interaction between the learning model and the emulation ability, so students had a higher

conceptual comprehension and higher formation of entrepreneurial mindset.

**Keywords:** *Project-Based Learning, Tri Kaya Parisudha, Emulation, Entrepreneurial Mindset*

## **I. Introduction**

A number of empirical studies have tried to ensure the extent to which entrepreneurship contributes to economic growth by creating its own employment. Even though the university graduates on entrepreneurship in China was 20% of the total graduates, only 2% of them chose to start their own businesses [1]. Under this condition, it is very important for the policy maker to foster entrepreneurial intentions among students. Similarly, Indonesia is concentrating on entrepreneurial promotion to develop and grow talented young entrepreneurs [2]. Rapid changes in the labor market as well as globalisation and the development of the information society require a new approach to education especially entrepreneurship education [3].

A significant gap still occurs between the expected and the reality, of the number of the vocational high school graduates who become entrepreneurs. Ideally, vocational high school graduates should not only be ready to work in business and industry, but also ready to create their own employment (entrepreneurship). They should be supporting the target of the government of the Republic of Indonesia to create 14% graduates who become entrepreneurs in 2020 [4]. However, according to the Central Statistics Agency data in August 2018, the number of unemployed people in Indonesia is 7 million. It is also stated that the number of the Indonesian workforce is 131.01 million people, with the unemployment percentage of 5.43% [5]. India, the neighboring country, is undertaking entrepreneurship development. Its Ministry of Micro, Small, Medium Enterprises is holding entrepreneurship training and skills development regularly to increase the number of young entrepreneurs [6]. Attention has to be given to entrepreneurship education, especially curriculum, method, training of resource persons and skills acquisition programs [7]. The development of innovation and

entrepreneurial education has a very important role in giving more comprehensive as well as accurate comprehension [8].

This condition seems to be the concern of all parties, especially teachers at schools, whose task is to teach the students to achieve the expected target, the independence for entrepreneurship [9-14]. The development of entrepreneurship recently became an important problem in the world [15-16], because a country is said to be prosperous if 2% of the population becomes an entrepreneur [17]. However, the implementation of entrepreneurship in vocational high schools is only about 1.93% of all school hours for six semesters [18]. This condition has not yet enabled the formation of independence and has not been able to fully instill entrepreneurial spirit for vocational graduates. Therefore, the design of entrepreneurial learning in vocational schools needs to be reviewed, such as the curriculum, learning strategies, methods, media, and ways to teach the entrepreneurship lesson.

The success of entrepreneurship learning in vocational high schools is now more focused on efforts to optimise abilities and train students' skills so that the methods and the learning models should all be directed and managed in the form of student-centred learning. The teachers should act as facilitators and motivators [19]. However, in fact, there are many teachers who apply the conventional learning process so that the students are accustomed to listen to the lectures delivered by the teacher. This teacher-centred and one-way learning will not be able to train important skills and to foster the spirit as well as the interests of students' in entrepreneurship.

Based on the results of observations in four vocational high schools in Bali Province, it was found that the model and the learning method applied were still conventional or teacher-centred. Students only listen, record the subject matter, and have never been given entrepreneurial practices. They were actually enthusiastic in entrepreneurship learning, but they became uninterested because the learning was only fulfilled by the activity of memorising and lacking in practical learning. As the result, their comprehension of the concept of entrepreneurship is low and it is difficult for them to foster their entrepreneurial mindset. Therefore, the formation of an entrepreneurial mindset can actually be done through

entrepreneurial learning with a practical approach or student-centred learning so that the students are invited to be directly involved in real learning, as the real entrepreneurs [20-21]. In this case, entrepreneurial learning has a number of concepts such as the concept of learning by doing [22] (Fayolle, 2013), learning with experience [23], constructivist learning and scientific learning for specialisation [24-30].

Emulation ability also influences the comprehension of concepts and the formation of students' entrepreneurial mindset. Emulation ability is the ability to use four technology domains, namely info ware, techno ware, human ware, and organ ware. The four domains of this technology are currently obvious in accordance with very rapid technological developments. The students are not only crammed with a set of knowledge, but also must be able to manage the information or sources of learning, manage themselves, adopt the use of modern tools in the culinary sector, and manage organisations, institutions or schools as a place for formal learning activities. Emulation ability becomes very important in the present era, considering that technological advances must be able to be followed and used, to support and improve the students' skills to improve comprehension of entrepreneurship and the formation of entrepreneurial mindset, especially in culinary studies. Mukhadis [31] (2009) states that the emulative ability of human resources in the use and development of technology is internalised in values and mindset to think creatively and productively.

Based on the above explanation, solutions to solve the problems are needed, especially those related to the low comprehension of students' concept of entrepreneurship and their entrepreneurial mindset. The teachers should change the conventional model and learning method to the innovative ones. One of the innovative learning models that fits the statement above is project-based Learning. The entrepreneurship learning in vocational high schools in the Bali Province can actually be integrated with local wisdom. One of Bali's local wisdoms that is considered to be relevant to be integrated, is the *Tri Kaya Parisudha* concept. The project-based learning which is constructed from the principles of constructivist learning with a focus on creative thinking, problem solving, and interaction between students is in line with *Tri Kaya Parisudha* (TKP) concept. This concept has the power to improve the comprehension of concept of entrepreneurship and the formation of an entrepreneurial mindset. *Tri Kaya Parisudha* consists of three concepts. The first is the

concept of *manacika*, the students' way of thinking which is directed to focus on the goal, so that the planning can be realised. The second is the concept of *wacika* or the communication emphasising how to convey the results of students' thinking in completing a project. The third one is *kayika* concept emphasising that the project can be done by following the plot designed by the students, with a focus on the appearance of the final product. The integration of the *Tri Kaya Parisudha* concept in effective project-based learning, is used to improve process skills and students' character values, as proven by a study conducted by Astawan [32]. He found that learning with *Tri Kaya Parisudha* concept is able to improve the processing skills and character values of the students. This will be able to strengthen identity as a person who has his/her own peculiarities [32-33]. In the project-based learning model, the students go through six stages of learning, namely: (1) start with the essential question, (2) design a plan for the project, (3) create a schedule, monitor the students and the progress of the project, (5) asses the outcome, and (6) evaluate the experience [34].

The integration of *Tri Kaya Parisudha* concept into project-based learning is considered to be able to foster the ability to think creatively, practice product making skills that lead to the comprehension of the concept of entrepreneurship and the formation of an entrepreneurial mindset. Therefore, it is necessary to study and prove empirically the influence of project-based learning with the *Tri Kaya Parisudha* concept and emulation ability on students' comprehension of concept of entrepreneurship and the formation of entrepreneurial mindset in culinary studies through research.

## II. Research Method

This study used a quasi-experimental design, especially pretest-posttest nonequivalent control group design. The design of the research can be seen in the Table 1.

Table 1. Experimental Design of Pre-test and Post-test in Two Groups with Random Assignment

Subject	Pretest	Treatment	Posttest
Rs	O1	X	O3
Rsc	O2	-	O4

Adapted from Mukhadis [31]

Note:

- Rs = random assignment notation (experimental group)
- Rsc = random assignment notation (control group)
- O<sub>1</sub> and O<sub>2</sub> = Pretest (initial observation) before treatment
- O<sub>3</sub> and O<sub>4</sub> = posttest (final observation) after treatment
- X = Treatment of project-based learning with *Tri Kaya Parisudha* concept
- = Project-based learning without *Tri Kaya Parisudha* concept

The two-factorial design used in this study were: (1) learning model factor consisting of two factors, namely project-based learning with the *Tri Kaya Parisudha* concept and project-based learning without the *Tri Kaya Parisudha* concept, (2) emulation ability factor consisting of two categories: high emulation ability and low emulation ability. The design used a 2 x 2 design as shown in the Table 2.

Table 2. Factorial Design

Emulation Ability	Learning Model	
	A	B
High (H)	Y <sub>1</sub> .A. H	Y <sub>1</sub> .B. H
	Y <sub>2</sub> .A. H	Y <sub>2</sub> .B. H
Low (L)	Y <sub>1</sub> .A. L	Y <sub>1</sub> .B. L
	Y <sub>2</sub> .A. L	Y <sub>2</sub> .B. L

Note:

- A : Project-based Learning Model with the *Tri Kaya Parisudha* Concept
- B : Project-based Learning Model without the *Tri Kaya Parisudha* Concept
- H : High Emulation Ability
- L : Low Emulation Ability

Y<sub>1</sub> : Comprehension of the Concept of Entrepreneurship

Y<sub>2</sub> : Formation of an Entrepreneurial Mindset

Based on the factorial design presented in Table 2, the main effect and the effect of simultaneous interaction of treatment variables, could be determined. By using the design, the main effect and the interaction effect of each treatment variable could be shown easily and clearly, according to what was stated in the research hypothesis.

The population of the study was the State Vocational Schools in Bali fulfilling several criteria. The criteria were having B accreditation, having a tourism program, a culinary program and culinary competence, and using the 2013 curriculum. Based on these criteria, the number of schools used as a study population was 16 state vocational high schools in 7 regencies/cities in Bali Province.

To determine schools as a research sample, two schools were taken in each population area. Since there were 6 regions the number of the schools used as samples were 12 schools, which were chosen with lottery technique. Of the 12 schools, 6 schools were determined to be the experimental group (project-based learning based on *Tri Kaya Parisudha* concept) and 6 schools were determined as the control group (project-based learning without *Tri Kaya Parisudha* concept). The determination of the experimental group was carried out randomly with lottery technique, because the classes of the school had been formed randomly not based on ranks. The number of students used as a sample was 412 people.

The data collected in this study were: (1) the comprehension of the concept of entrepreneurship, (2) the formation of entrepreneurial mindset and (3) the emulation ability. In this study, the comprehension of concepts is defined as the entrepreneurial abilities in the cognitive factor that the students have after experiencing learning based on predetermined learning goals. The comprehension of the concept of entrepreneurship was measured by a test that was compiled and developed based on the material of making prototype of milk pie made from Balinese cassava flour. The test developed in this study was in the form of multiple choice consisting of 40 questions.

The instrument used to measure entrepreneurial mindset was an entrepreneur mindset questionnaire developed and adapted from Suwito and Budijono [35] which was adjusted to the culinary studies. Meanwhile, the instrument to measure emulation ability were emulation

ability questionnaires also adapted from him which was adjusted to culinary studies. The entrepreneur mindset questionnaire consisted of 25 items and used Likert scale consisting of four response options namely strongly agree (SA), agree (A), disagree (D), and strongly disagree (SD). The emulation ability questionnaire consisted of 25 items and used Likert scale consisting of four response options namely 4 = always, 3 = often, 2 = rarely, and 1 = never.

The data were analysed by using statistics, namely MANOVA test with SPSS software version 16.0 for Windows. In this analysis, all statistical hypotheses were proven. The statistical hypothesis tested were: (1) the group of students who were taught by using project-based learning with *Tri Kaya Parisudha* concept was superior to the group of students who were taught by project-based learning model without *Tri Kaya Parisudha* concept in comprehension of the concept of entrepreneurship; (2) the group of students who were taught by using project-based learning with *Tri Kaya Parisudha* concept was superior to the group of students who were taught by using project-based learning model without *Tri Kaya Parisudha* concept in the formation of entrepreneurial mindset; (3) there was a significant interaction effect between the learning model and students' emulation ability on students' comprehension of the concept of entrepreneurship; (4) there was a significant interaction effect between the learning model and students' emulation ability on the formation of the students' entrepreneurial mindset; (5) The group of students who was taught by using project-based learning with *Tri Kaya Parisudha* concept was superior to the group of students who were taught by using project-based learning model with *Tri Kaya Parisudha* concept in comprehension concept of entrepreneurships and the formation of students' entrepreneurial mindset; (6) there was the effect of simultaneous interaction between the learning model and students' emulation ability on the comprehension of the concept of entrepreneurship and the formation of students' entrepreneurial mindset.

### III. FINDINGS

Based on the analysis of SPSS version 16.0 for windows, the following data were obtained (Table 3 and Table 4).

Table 3. Descriptive Statistics of Research Findings

	Types of Learning	Emulation Ability	Mean	SD	N
<b>Comprehension of Concept of entrepreneurship</b>	Project-based Learning with TKP	High Emulation Ability	.5395	.19025	104
		Low Emulation Ability	.4400	.19785	104
		Total	.4898	.19994	208
	Project-based Learning without TKP	High Emulation Ability	.4282	.18085	102
		Low Emulation Ability	.4538	.18765	104
		Total	.4412	.18431	206
	Total	High Emulation Ability	.4844	.19342	206
		Low Emulation Ability	.4469	.19248	208
		Total	.4656	.19362	414
<b>Formation of Concept of entrepreneurship</b>	Project-based Learning with TKP	High Emulation Ability	.4430	.18083	104
		Low Emulation Ability	.3605	.21377	104
		Total	.4017	.20179	208
	Project-based Learning without TKP	High Emulation Ability	.3308	.15814	102
		Low Emulation Ability	.3395	.17162	104
		Total	.3352	.16474	206
	Total	High Emulation Ability	.3874	.17864	206
		Low Emulation Ability	.3500	.19366	208
		Total	.3686	.18705	414

Table 3 showed the average comprehension of concept of entrepreneurship of students who were taught by using project-based learning the with *Tri Kaya Parisudha* concept was .489 or .49, while the comprehension of entrepreneurship concept of students who were taught by using project-based learning without the *Tri Kaya Parisudha* concept was .44. It can also be seen in the table that the average formation of entrepreneurial mindset of students who were taught by using project-based learning with the *Tri Kaya Parisudha* concept was 0.40, while the average formation of entrepreneurial mindset of students who were taught by using project-based learning without the *Tri Kaya Parisudha* concept was 0.34.

Furthermore, Table 4 showed the results of the ANAVA test, which was showed by the coefficient F of the comprehension of concept and the formation of mindset. The first hypothesis stated that the group of students who were taught by using project-based learning with the *Tri Kaya Parisudha* concept was superior to the group of students who were taught by using project-based learning model without the *Tri Kaya Parisudha* concept, in comprehending the concept of entrepreneurship. Based on the result of the test, the F coefficient was 6.856 (table 4) with the significance (sig.) of .009. When the alpha was set at 5%, the value was sig. (.009 <.05) which means that there was significant difference between the two groups. The average comprehension of the concept of entrepreneurship in

the group of students participating in project-based learning with the *Tri Kaya Parisudha* concept was 0.49, while in the group of students participating the class taught by using project-based learning without the *Tri Kaya Parisudha* concept, it was .44 (see Table 3 descriptive results) .

Table 4. The Result of ANAVA

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	Concept of Entrepreneurship Comprehension	.793 <sup>a</sup>	3	.264	7.379	.000
	Entrepreneurial Mindset Formation	.816 <sup>b</sup>	3	.272	8.180	.000
Intercept	Concept of Entrepreneurship Comprehension	89.665	1	89.665	2.502E3	.000
	Entrepreneurial Mindset Formation	56.196	1	56.196	1.690E3	.000
a	Concept of Entrepreneurship Comprehension	.246	1	.246	6.856	.009
	Entrepreneurial Mindset Formation	.459	1	.459	13.795	.000
b	Concept of Entrepreneurship Comprehension	.141	1	.141	3.944	.048
	Entrepreneurial Mindset Formation	.141	1	.141	4.233	.040
a * b	Concept of Entrepreneurship Comprehension	.405	1	.405	11.306	.001
	Entrepreneurial Mindset Formation	.215	1	.215	6.476	.011
Error	Concept of Entrepreneurship Comprehension	14.690	410	.036		
	Entrepreneurial Mindset Formation	13.634	410	.033		
Total	Concept of Entrepreneurship Comprehension	105.224	414			
	Entrepreneurial Mindset Formation	70.706	414			
Corrected Total	Concept of Entrepreneurship Comprehension	15.484	413			
	Entrepreneurial Mindset Formation	14.451	413			

a. R Squared = .051 (Adjusted R Squared = .044)

b. R Squared = .056 (Adjusted R Squared = .050)

The second hypothesis stated that the group of students who were taught by using project-based learning with the insertion of the *Tri Kaya Parisudha* concept was superior to the group of students who was taught by using project-based learning model without the insertion of the *Tri Kaya Parisudha* concept in forming the students' entrepreneurial mindset. The test results obtained the value of F of 13.795 with the significance (Sig.) of .000. When the alpha was set at 5%, the value of Sig. was much smaller (.000 < .05). This

means that there was significant difference between the two groups. The average formation of entrepreneurial mindset in the group of students who participated in the class taught by using project-based learning with the *Tri Kaya Parisudha* concept was 0.40, while the average comprehension of the concept of entrepreneurship in the group of students who participated in project-based learning without the *Tri Kaya Parisudha* was 0.34 (see Table 3). So, the research hypothesis was accepted.

The third hypothesis stated that there was a significant interaction effect between the learning model and students' emulation ability on the students' comprehension of the concept of entrepreneurship. From the analysis by using two-way ANAVA, it was obtained that the value of F was 11.306 (Table 4) with the significance (Sig.) of .001. When the alpha was set at 5%, the value of Sig. was much smaller ( $.001 < .05$ ). This means that there was an influence of the interaction between the type of learning and the ability of emulation to understand the concept. So, the research hypothesis was accepted. The types of interactions that occurred can be seen in Figure 1 below.

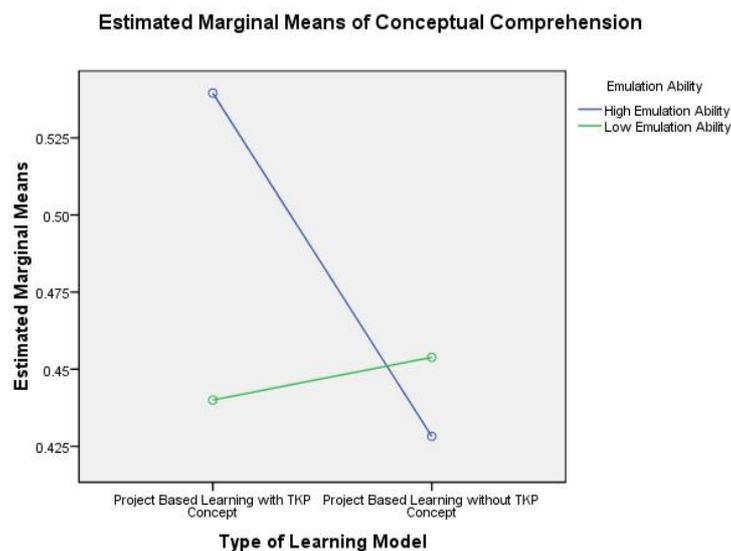


Figure 1 Interaction of Learning Model and Emulation Ability on the Comprehension of the Concept of Entrepreneurship

Based on Figure 1, the types of interactions that occurred were disordinal or crossed interactions. It means that for students who had high emulation abilities, the comprehension of the concept of entrepreneurship taught by using project-based learning with the *Tri Kaya*

*Parisudha* concept was higher than the students who were taught by using project-based learning without the *Tri Kaya Parisudha* concept. For the students who had low emulation abilities, comprehension of the concepts of entrepreneurship owned by the students taught by using project-based learning with the *Tri Kaya Parisudha* concept was lower than the students taught by using project-based learning with the *Tri Kaya Parisudha* concept (see Table 3).

The fourth hypothesis stated that there was a significant interaction effect between the learning model and students' emulation ability on the formation of the students' entrepreneurial mindset. The analysis of two-way ANOVA showed the value of F was 6.476 (Table 4) with the significance (Sig.) of .011. When the alpha was set at 5%, the value of Sig. was lower ( $.011 < .05$ ). This means that there was an influence of the interaction between the type of learning and the ability of emulation to the formation of mindset. So, the research hypothesis was accepted. The types of interactions that occurred can be seen in the Figure 2.

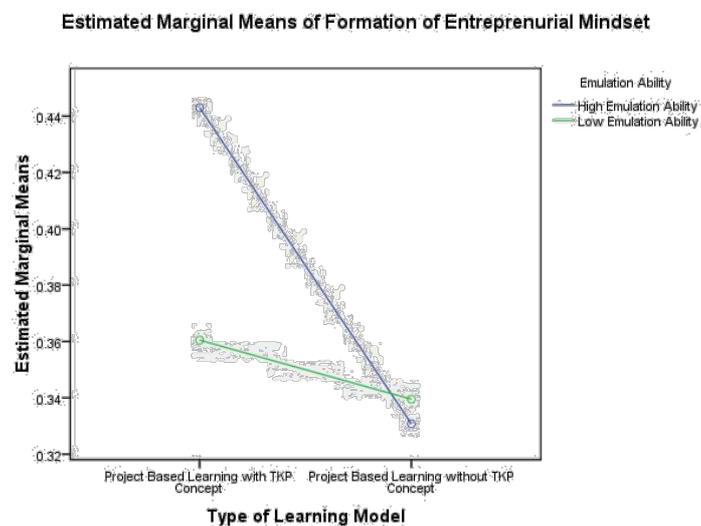


Figure 2 Interaction of learning model and emulation ability towards the formation of entrepreneurial mindset

Figure 2 showed that the learning model and emulation ability formed disordinal interactions. It means that for students with high emulation ability, the formation of entrepreneurial mind-set of students taught by using project-based learning with the *Tri*

*Kaya Parisudha* concept was higher than the students who were taught by using project-based learning without the *Tri Kaya Parisudha* concept. For students with low emulation ability, the formation of entrepreneurial mind-set of students taught by using project-based learning without the *Tri Kaya Parisudha* concept is lower than students taught by using project-based learning with the *Tri Kaya Parisudha* concept (see Table 3).

Meanwhile, Table 5 showed the results of MANOVA test as indicated by the Wilks Lambda coefficient of the dependent variable conceptual comprehension and the formation of the students' entrepreneurial mindset. The fifth hypothesis stated that the group of students taught by using project-based learning with the *Tri Kaya Parisudha* concept was superior to the group of students taught by using project-based learning model without the *Tri Kaya Parisudha* concept in comprehending the concept of entrepreneurship and in forming students' entrepreneurial mindset. From the one-way MANOVA analysis, the coefficient of the Lambda Wilks test was 10.474 (Table 5) with the significance (Sig.) of 0.000. When the alpha was set at 5%, the value of sig. was lower ( $.000 < .05$ ). This means that there was a significant difference. The average conceptual comprehension and the formation of mindset of students who were taught by using project-based learning with the *Tri Kaya Parisudha* was .49 and .40, while the average conceptual comprehension and formation of mindset of students who were taught by using project-based learning without the *Tri Kaya Parisudha* concept was .44 and .34 (see Table 3)

The sixth hypothesis stated that there was an effect of simultaneous interaction between the learning model and the students' emulation ability on the comprehension of the concept of entrepreneurship and the formation of students' entrepreneurial mindset. The hypothesis testing was carried out by using two-way MANOVA. The coefficients of Wilks lambda obtained was 9.022 (Table 5) with the significance (Sig.) of .000. When the alpha significance level was set at 5%, the value of Sig. was lower ( $.000 < .05$ ). This means that there was an effect of simultaneous interaction between learning models and emulation abilities on the comprehension of concepts and the formation of mindset. Therefore, the effect of project-based learning with the insertion of the *Tri Kaya Parisudha* concept was dependent on the variable of emulation ability.

Table 5 Manova Test Results

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.912	2.128E3 <sup>a</sup>	2.000	409.000	.000
	Wilks' Lambda	.088	2.128E3 <sup>a</sup>	2.000	409.000	.000
	Hotelling's Trace	10.405	2.128E3 <sup>a</sup>	2.000	409.000	.000
	Roy's Largest Root	10.405	2.128E3 <sup>a</sup>	2.000	409.000	.000
a	Pillai's Trace	.049	10.474 <sup>a</sup>	2.000	409.000	.000
	Wilks' Lambda	.951	10.474 <sup>a</sup>	2.000	409.000	.000
	Hotelling's Trace	.051	10.474 <sup>a</sup>	2.000	409.000	.000
	Roy's Largest Root	.051	10.474 <sup>a</sup>	2.000	409.000	.000
b	Pillai's Trace	.020	4.152 <sup>a</sup>	2.000	409.000	.016
	Wilks' Lambda	.980	4.152 <sup>a</sup>	2.000	409.000	.016
	Hotelling's Trace	.020	4.152 <sup>a</sup>	2.000	409.000	.016
	Roy's Largest Root	.020	4.152 <sup>a</sup>	2.000	409.000	.016
a * b	Pillai's Trace	.042	9.022 <sup>a</sup>	2.000	409.000	.000
	Wilks' Lambda	.958	9.022 <sup>a</sup>	2.000	409.000	.000
	Hotelling's Trace	.044	9.022 <sup>a</sup>	2.000	409.000	.000
	Roy's Largest Root	.044	9.022 <sup>a</sup>	2.000	409.000	.000

a. Exact statistic

b. Design: Intercept + a + b + a \* b

#### IV. Discussion

Based on the research findings, for grade XI students of vocational high schools, the comprehension of the concept of entrepreneurship of students taught by using project-based learning model with the *Tri Kaya Parisudha* concept was superior to the group of students taught by using project-based learning model without the *Tri Kaya Parisudha* concept. This finding is in line with the results of previous studies that project-based learning is able to improve students' conceptual comprehension [30] [35-36]. The project-based learning model with the *Tri Kaya Parisudha* concept places the students as learning centres, involves the students directly in the project, and is based on the concept of thinking, communicating, and acting according to the *Tri Kaya Parisudha*'s values or the teaching concepts. Although the students know the concept of the *Tri Kaya Parisudha* on a theoretical level, the concept is not meaningful when it is not implemented in concrete action. After joining the learning with concrete actions from the *Tri Kaya Parisudha* values, the comprehension of students' concepts is higher and the internalised values are getting better and more real. It can be seen in the students' actions such as being polite, disciplined, punctual and honest.

The formation of entrepreneurial mindset of vocational high school students taught by using project-based learning model with the *Tri Kaya Parisudha* concept is superior to the formation of entrepreneurial mindset of the students taught by using project-based learning model without the *Tri Kaya Parisudha* concept. This finding is in line with the theory that project-based learning with the *Tri Kaya Parisudha* concept is designed to produce real products and prioritise full student involvement in learning. Through the concept of *manacika* (thinking) about the project of milk pie, *wacika* (discussing with the working group) and *kayika* (doing), the students do the project-based on the plan that has been set with the principles of honesty and mutual support. The experience owned by the students in doing the milk pie projects can influence the mindset of the students to be entrepreneurs in real life. The experience can also grow the students' entrepreneurial spirit. This is in line with the results of the study conducted by Insyasiska [37] that project-based learning is able to motivate the students and increase self-confidence, independence as well as responsibility in learning in accordance with the concept of the formation of an entrepreneurial mindset. Likewise, Chiang and Lee [38], in their study, indicate that project-based learning does not only increase the learning motivation of vocational school students, but also facilitates their problem solving abilities [1] [39-40].

The interaction between the type of learning and the ability of emulation to understand the concept of entrepreneurship and the formation of an entrepreneurial mindset, shows that project-based learning significantly increases the students' learning easiness, which is in line with the research conducted by Hamoush [41]. He further found that educators can use project-based learning approaches to facilitate students' learning since working together on projects which are supported by high emulation ability, can improve students' ability to increase their entrepreneurial mindset. Lessons are set to enable the students to practise and increase the level of their comprehension of the subject matter. Project-based learning uses the principle of learning by doing, which is a process of acquiring learning outcomes by doing a certain action. The projects given to the students relate to their surroundings, so that it opens up the views towards the entrepreneurial mindset, by utilising local potential around their environment [33] [42]. The internalised *Tri Kaya Parisudha* concept can reflect the learning, thoughts, expressions, and actions that they think (*manacika*), say (*wacika*) and do (*kayika*). In completing the project, the *Tri Kaya Parisudha* concept is implemented. When

the students make mistakes, they have to apologise, and if something is missing, they have to improve it so that in the future everything will be better. In this case, the role of teachers is very important as a model and a cultural intermediary that is active, creative and wise, so that the students will gain learning experiences that contain good virtues and a sense of responsibility towards themselves [43].

## V. Conclusion

Based on the research findings and discussion, it can be concluded that: (1) there is significant difference in the comprehension of concept of entrepreneurship and the formation of entrepreneurial mindset of students participating in project-based learning with the *Tri Kaya Parisudha* concept and those participating in project-based learning models without the *Tri Kaya Parisudha* concept, with the F coefficients value of 6.856 and the significance (sig.) of 0.009 and F coefficient of 13.795 with significance (sig.) of 0.000 at 5% significance level, (2) there is an interaction between learning model and emulation ability towards conceptual comprehension and formation of students' entrepreneurial mindset with F coefficient of 11.306 and significance (sig.) of 0.001 and F coefficient of 6.476 with significance (sig.) of 0.011 at 5% significance level, (3) there is a significant effect between the project-based learning model and the *Tri Kaya Parisudha* concept on comprehension of concepts and mindset formation of students' entrepreneurship, with the coefficient of Wilk Lambda of 10.474 with the significance (sig) of 0.000 at the alpha of 5%, (4) there is an effect of simultaneous interaction between the learning model and students' emulation ability on conceptual comprehension and the formation of students' entrepreneurial mindset, with the Wilk Lambda coefficient of 9.022 with significance (sig) of 0.000 at the alpha of 5%. The implication of this finding is that the teachers of the Creative Product and Entrepreneurship subject should implement a project-based learning model with *Tri Kaya Parisudha* (*Manacika, Wacika, and Kayika*) concepts. It should be collaborated with emulation ability and integrated in learning syntax, to produce real products and foster an entrepreneurial mindset, such as great desire, independence, and responsiveness to market opportunities, creativity and innovation, courage to take risks, work ethic and high motivation for progress, leadership and future orientation.

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