# The Influence of Technology-based PBL Learning Model, Learning Method, Learning Motivation on Entrepreneurship Attitudes in Economics Education Department students of STKIP PGRI Jombang

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#### **Abstract**

In order for higher education entrepreneurship education to be able to make students have a productive and efficient entrepreneurial attitude, a learning process with the right strategy is needed, to provide broad opportunities for students to construct meanings for the entrepreneurial concepts they learn in relation to the learning experiences they get in life. daily. Such a learning strategy requires a contextual approach. In its application, it is felt that it is efficient if real phenomena that exist in students' daily lives can be presented in the classroom through a technology-based PBL learning model. This study was designed as an experimental study, which populated on 236 students of the Economic Education Department STKIP PGRI Jombang. The number of research samples was 129 students. The data collected were analyzed using Multiple Linear Regression. The results prove: there is an effect of technology-based PBL learning models on entrepreneurial attitudes, there is an influence of motivation on entrepreneurial attitudes and Simultaneously there is an influence of the PBL learning model based on technology, learning methods, learning motivation on entrepreneurial attitudes.

**Keywords:** Technology-based PBL Learning Model, Learning Method, Learning Motivation, Entrepreneurial Attitude.

#### 1. Introduction

21st century learning has influenced the education system, the education system in the world including in Indonesia. The quality of learning must be improved through innovation and educational development. The education system in Higher Education with the Merdeka Campus program is designed to encourage higher education lecturers and students to disrupt themselves and transform agile. Higher education must be ready to produce graduates who are flexible, adaptive, self-directed, creative, complex problem solver, and cannot be separated from strong characters (PKKMB) 2020, Universitas Indo Global Mandiri (UIGM).

Tertiary Education Institutions focus on 8 (eight) indicators that have the potential to bring out the potential of higher education including their resources to interact intensely with the industrial world and the world of work, by inviting industry to enter higher education, and vice versa (Dwi Ratnadi, 2020). In line with the existence of an independent campus, students are required to have special skills that students must have for their field of study and skills that they must master when they graduate. This expertise is not only theoretical knowledge but also the ability (competence) of students to be active, creative, and innovative in their field of study. Every student should be able to use their knowledge to be applied in everyday life. Therefore, the application of learning methods must be in accordance with the teaching and learning process (Setiadi Wira Buana, 2011).

According to Taha (2008), the learning process in the classroom is focused on memorizing information. students need to remember information but are not required to understand the information that is applied in everyday life. As a result, student learning outcomes are not always achieved because student knowledge is rich in theory, but students' understanding and experience in applying this knowledge in practice is very lacking.

This situation applies to all courses, including Entrepreneurship courses. Students cannot develop their ability to think critically, creatively, innovatively, and systematically because the learning strategies that encourage this thinking are not implemented properly in the classroom. Students are only taught how to memorize entrepreneurship theory but are not taught how they can develop problem-solving skills in life.

This is in line with the perspective of the Entrepreneurship course where students should be dynamic, motivated, creative, able to take initiative, and have good thinking skills. They must be able to cooperate on assignments. Unfortunately, Entrepreneurship lecturers usually use conventional learning models which are dominated by lectures, questions and answers, and assignments. The conventional learning model has a weakness, namely the lack of student interaction, and many students do not understand the information conveyed by the lecturer.

The conventional learning model emphasizes changes in observable behavior but the independent campus curriculum demands not only observable behavior changes but also changes in students' critical thinking skills. Therefore, to improve learning outcomes, lecturers need a learning model that does not burden students with learning facts. Entrepreneurship applies a technology-based PBL learning model so that the teaching patterns vary.

Technology-based PBL is effective in developing questioning skills, thinking skills, and problem solving and independent learning skills. Ibrahim (2005) suggested that PBL encourages dynamic behavior, motivation, creativity, initiative, and thinking skills in students. Fadly (2012) shows that there is an increase in learning activities and achievement of learning outcomes after the application of the technology-based PBL model on entrepreneurship.

An approach is needed that makes students active so that they have good understanding and skills that have an impact on learning outcomes. The technology-based PBL model is a student-centered learning model that uses problems as a first step in gathering and integrating new knowledge. Students are given questions at the beginning of the learning process. They then solve the problem and finally integrate the knowledge in the form of a report. Technology-based PBL can provide students with a deeper understanding of theoretical and practical analysis.

The educational process is not just teaching, but there must be communication between educators and students because society grows and develops through social relationships. One-way teaching and learning process does not support student participation in the learning process. Therefore, students must be active in supporting the teaching and learning process. The Entrepreneurship course is an example of a course that requires good collaboration between students and lecturers. One of the goals of Entrepreneurship in Higher Education is in the ability to analyze and solve problems that are more real and concrete than learning in class through the material presented by the lecturer, besides that students can learn soft skills as well as hard skills at the same time. The hope is that students have knowledge of entrepreneurial concepts and principles and have the skills to develop this knowledge and apply it in everyday life. The knowledge and skills acquired must also help students to think and act entrepreneurially and to have an ethical and socially responsible attitude.

These considerations lead us to formulate the following research questions: Do technology-based PBL models, learning methods, and learning motivation affect entrepreneurial attitudes?

## 1.1 Objectives

To explain whether there is an effect of the problem based learning model based on learning technology and learning motivation on entrepreneurial attitudes.

## 2. Literature Review

#### 2.1 Problem-Based Learning

The PBL strategy is to give students problems and assignments that they will find in the world of work. In their efforts to solve these problems, students develop the knowledge and skills needed. Therefore, the sequence of the learning activities should parallel the sequence of events that occur in the working world. In this way, the students develop the cognitive skills and knowledge they need for the world of work. In this process, the students are responsible for their own learning because these are skills they will need later in their professional lives. They apply what they already know, find out what they need to know, and learn how to find the information through various sources, including

online sources, libraries, professionals, and experts. In short, the PBL model aims to develop and apply important skills, such as problem-solving, self-study, teamworking, and accessing into knowledge (Barrows & Tamblyn, 2005).

PBL is student-centered learning and is a learning model where problems control the learning process. PBL has been a very popular learning method in medicine since the 1970s. PBL focuses on presenting a problem (real-stimulus) to students, then asking them to solve the problem through research and a series of investigations based on the theory, concepts, and principles learned from different perspectives.

Problems become the focus, stimulus, and guide while the teacher acts as the facilitator and guide. There are five variations of PBL: 1) Problem as a guide: The problem becomes a reference for students. The reading copy is in accordance with the problem. Problems help to mold the studen's frame for working on assignments. 2). Problems as a unifier and an evaluator: Problems are presented after assignments, and explanations are given. This approach aims to provide students with opportunities to apply their knowledge to solve problems. 3) Problems as examples: Problems are used as examples and part of the learning material. Problems aim to draw on theories, concepts, or principles and for students and teachers to discuss them together. 4) Problems that facilitate the learning process: Problems are used as a tool to train students and for students and teacher to them discuss together. 5) Problems that stimulate learning: the problem stimulate students to develop skills in collecting and analyzing data related to metacognitive problems and skills.

PBL is a learning environment where problems control the learning process. This means the students are given feedback in the form of problems before they learn. The problems are designed so that students know they must learn some new knowledge before they can solve the problem. This approach includes both a curriculum and a process. The curriculum consists of problems that have been carefully designed and chosen, requiring students to be proficient in critical thinking, problem-solving, self-directed strategic learning, and team participation skills. The process copies the systemic approach commonly used to solve the problems or to address the challenges faced in a person's life and career.

According to Suyatno (2009:58), the "...PBL model is a learning process where the starting point of learning is based on problems in real life. The students are stimulated to study prior knowledge to form new knowledge and experiences." For Arends (in Trianto 2007: 68), the PBL model is a learning approach in which students work on authentic problems to compile their own knowledge, develop inquiry and higher-level thinking skills, as well as develop self-confidence and belief in their abilities. PBL models are related to other learning models as revealed by Trianto (2007: 68): "PBL Model is related to Project-Based Learning, Experience-Based Education, Authentic Learning, and Anchored Instruction."

## 2.2 Learning Method

Method means 1) an ability to move, act, etc., 2) method, and 3) variation, therefore; method can also be interpreted as a way or ability to do (Poerwadarminto: 1986). Studying is the effort carried out by someone to obtain a change behavior, as a result of his/her own experience in interacting with his/her environment. (Slameto: 1995) proposed that learning method was the way or ability to carry out one's effort to obtain a change in new behavior as a whole, as a result of his/her own experience in interacting with his/her environment.

In addition, the learning method shows an understanding of attention/interest from the processes carried out during the learning activities (Robotham et al., 2011). The learning method is a complexity/pattern of characteristics in which the whole is greater than the parts. Therefore, the learning method relates to the general tendency towards a particular/specific learning approach shown by an individual to carry out his/her effort to obtain a new change of behavior as a whole, as a result of his/her own experience in interaction with his/her environment.

# 2.3 Learning Motivation

A motivation is a state of a cognitive arousal which provokes a "decision to act" as a result of which there is "sustained intellectual and/or physical effort" so that the person can achieve some "previously set a goal" (Harmer, 2001). Motivation can be seenas a condition within someone that encourages that person to carry out certain activities to achive the desired goals (Purwanto, 2011) According to Brown (2001:72) "Motivation is the extent to which you make choices about (a) goals to pursue and (b) the effort you will devote to that pursuit"

Motivation can be seen as an individual's internal drive. Motivation is dependent on individual internal factors, but these can be influenced by other internal factors and external factors in the environment. Thus, motivation has been

defined as encouragement which either comes from someone's self or external to someone, to do something (Owens, 1991).

Various external factors will influence someone's motivation. Buford & Bedeian (1988) argued that motivation can be based on pressure, desire, and encouragement in relation to a need. Therefore, if it becomes a necessity, someone will have the motivation to conduct an activity to meet the need. Ardhana (1990) mentioned motivation as a very important element in the education process and in the process of carrying out tasks in everyday life. Because of the importance of motivation in everyday life, there have been many studies related to motivation in such areas of education and employment.

Consequently, in the broadest sense, motivation is a state (whether it is in the form of needs, desires, impulses, or urges) that compels a person to do a certain activity. In other words, motivation is the potential of someone to carry out an activity to achieve a goal.

# 2.4 Entrepreneurial Attitudes

In this study, attitude means a person's way of thinking or feeling about aspects of entrpreneurship, and especially business, the response can be negative or positive. Someone who acts and thinks healthily, ideally, and positively can be said as someone who has a positive attitude. This positive attitude is characterized by the courage to make decisions, and the courage to take risks as a result of the decisions taken, such as in the field of entrepreneurship or business. People with these kinds of attitude are known as someone who has an entrepreneurial attitude (Danuhadimedjo, 1998).

An entrepreneurial attitude identifies someone as having a controlled mental attitude. It describes can control the way they think and behave (Almasdi,2006). For an entrepreneur, the most important thing is to have a strong belief that what they are doing will bring prosperity in the future.

Entrepreneurial behavior patterns are shown by the following behaviors and abilities: 1) personality: having creativity, self-discipline, self-confidence, the courage to take risk, as well as drive and a strong will; 2) relationship skills, good communication, leadership, and management skills in interpersonal relationships; 3) marketing: the ability to determine products and prices as well as advertising and promotion; 4) expertise in regulating: business operations involves goal setting, planning, and scheduling, as well as personal arrangements; 5) finance: the attitude towards money and how to manage it (Hawkins and Turla, 1986)

Six characteristics of human beings who have entrepreneurial attitudes are: 1) having a strong willingness to achieve their goals and needs. 2) having a strong belief in themselves. 3) being honest and responsible. 4) having physical and mental resilience. 5) being diligent and resilient in working and trying. 6) having constructive and creative thinking (Soemanto, 1999).

#### 3. Methods

This research is a type of quantitative research with multiple linear regression test. The objective is to explain whether there is an influence between variables X1, X2 and X3 on variable Y. With the following research design:

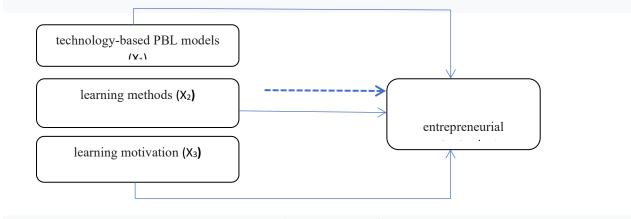


Image 1. Research design

Source : Sugiono (2011:10-11)

Where:

X<sub>1</sub> : technology-based PBL models

X<sub>2</sub> : learning methods
 X<sub>3</sub> : learning motivation
 Y : entrepreneurial attitudes

The population in this study were 236 students of the STKIP PGRI Jombang Economic Education Department with a sample size of 129 students consisting of students of Class 2017, Class of 2018 and Class of 2019. This research has two variables, namely: The independent variable (X1) is technology-based PBL models, (X2): learning methods, (X3); Learning Motivation and Dependent Variables: (Y) is Entrepreneurial Attitudes

The data analysis technique used is: Multiple Linear Regression Analysis. The objective is to explain whether there is an effect of the use of PBL based technology, learning methods, learning motivation on entrepreneurial attitudes. Formulated as follows:

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3$$
 (Priyatno(2009:73)

Where:

X<sub>1</sub> : technology-based PBL models

X<sub>2</sub> : learning methods
 X<sub>3</sub> : learning motivation
 Y : entrepreneurial attitudes

a : constant (Y value if X1, X2 and X3 = 0)

### 4. Data Collection

Data collection techniques used by the study were: observation and questionnaires.

#### 5. Results and Discussion

In accordance with the research design developed, the data that was successfully collected in this study were quantitative data on an interval or ordinal measurement scale. The data in question is data obtained from 129 economic education students, consisting of students of Class 2017, students of Class 2018 and students of Class 2019. In sequence, data will be presented on student learning methods, student learning motivation levels, entrepreneurial attitudes in entrepreneurship learning

# **5.1 Descriptive Statistic**

**Table 1: Descriptive Statistics** 

	Mean	Std. Deviation	N
Entrepreneurship Attitudes	3.3030	.04098	129
PBL	4.5006	.03537	129
Learning Method	4.3696	.10861	129
Learning Motivation	4.1604	.14522	129

Based on table 1, it is known that the amount of data is 129 with an average entrepreneurial attitude of 3.3030 with a standard deviation of 0.04098, the average use of technology-based PBL is 4.5006 with a standard deviation of 0.3537, while the average method learning 4.3696 with a standard deviation of 0.10861 and an average learning motivation of 4.1604 with a standard deviation of 0.14522.

Table 2: Model Summary b Model Summary b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.442ª	.195	.176	.03721

a. Predictors: (Constant), Learning Motivation, PBL, Learning Method

b. Dependent Variable: Entrepreneurship Attitudes

Based on the table: 2 it can be seen that the value of the coefficient of determination (R Square) is 0.195, this value shows the magnitude of the influence variable using technology-based Problem Based Learning learning models, learning motivation, learning methods on entrepreneurial attitudes by 19.5%. while the remaining 80.5% is caused by other independent variables that are not proposed in this study.

#### **Hypothesis Test**

Hypothesis testing is conducted to determine the effect of the independent variable on the dependent variable either partially or simultaneously.

#### 1. Simultaneous test

Table: 3 ANOVAb

# ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.042	3	.014	10.099	.000a
	Residual	.173	125	.001		
	Total	.215	128			

a. Predictors: (Constant), Learning Motivation, PBL, Learning Method

b. Dependent Variable: Entrepreneurship Attitudes

Based on table 3 it is known that the simultaneous use of the technology-based PBL model, learning method and learning motivation simultaneously affects entrepreneurial attitudes as evidenced by the F Sig value. of 0.000 < 0.05.

## 2. Partial Test

Table 4: Coefficients<sup>a</sup>

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		Unstandardized Coefficients		Standardized Coefficients			
Mode	el	В	Std. Error	Beta	t	Sig.	
1	(Constant)	1.184	.427		2.774	.006	
	PBL	.363	.095	.314	3.841	.000	
	Learning Method	.067	.032	.177	2.108	.037	
	Learning Motivation	.046	.023	.164	1.985	.049	

a. Dependent Variable: Entrepreneurship Attitudes

Based on table 4, it is known that the variable using the PBL model based on technology has an effect on entrepreneurial attitudes as evidenced by the significance value t of 0.000 < 0.05, the learning method variable has an effect on entrepreneurial attitudes with a significance value of t of 0.037 < 0.05 and the learning motivation variable also has an effect. towards entrepreneurial attitudes with a significance value of 0.049.

Based on table 4, it can also be seen that the multiple regression model is as follows:

$$Y = a + X_1 + b_2X_2 + b_3X_3$$
  
 $Y = 1,184 + 0.363 X_1 + 0,067 X_2 + 0.046 X_3$ 

Based on the regression model above, it is known that the constant value of 1.184 means that when the variable X1 (use of the technology-based PBL model), X2 (learning method) and X3 (learning motivation) is constant or the value is zero, the value of the Y variable (entrepreneurial attitude is 1.184. The coefficient value of X1 (using the technology-based PBL model) is 0.363 which means that when X1 increases by one unit, the Y value will increase by 0.363 units, assuming the X2 and X3 variables are constant. The value of the X2 coefficient (how to learn) is 0.067 which means that when X2 increases by one unit, the Y value will increase by 0.067 units, assuming the variables X1 and X3 are constant. The value of the X3 coefficient (learning motivation) is 0.046 which means that when X3 increases by one unit, the Y value will increase by 0.046 units, assuming the variables X1 and X2 are constant.

#### 5.2 Discussion

The results of the first research findings indicate that in the learning process, a lecturer can use a technology-based Problem Based Learning model in various groups of students. A lecturer who uses a technology-based Problem Based Learning model in delivering entrepreneurship material to students is not only focused on theory, but more on practical applications. Students of class 2017, 2018, 2019 have a lot of lecture material that requires students to come into contact with real practical applications, both in groups and individually.

The role of lecturers is very important in using the appropriate learning model in accordance with the conditions of an independent campus within the scope of the Entrepreneurship curriculum. The success of entrepreneurship education and learning lies in the skills of lecturers to manage classes and motivate students to grow a sense of enthusiasm and an attitude of not giving up in the face of failure when doing an unsuccessful business.

This finding strengthens the research results of "Mushonif Socheh", a lecturer at SMK Negeri 2 Metro Lampung who stated that quite a lot of people are not yet able to do entrepreneurship due to the learning process, facilities and environment that are not conducive, also symptoms of a decline in honesty and social responsibility so that indirectly they participate. contribute to the learning process at school. In the learning process it cannot be separated from the communication process where there is a process of transferring knowledge and values. If attitude is the result of learning, the key to learning attitudes lies in the cognitive process in student learning.

Bloom's taxonomy, no matter how low the level of the student's cognitive process can affect attitudes (Munandar, 1999). However, a low level of cognition may affect attitudes, but the effect is very weak and attitudes tend to be stable. We believe that the cognitive processes that can significantly foster and develop attitudes, in line with Bloom's Cognition taxonomy, are at the level of analysis, synthesis and evaluation. It is at this level that it allows students to obtain life values that can foster confidence which is the main key to fostering and developing attitudes.

Through the process of accommodation and assimilation of knowledge, experiences and values into the student's brain as Pieget's opinion, in turn will become a reference in responding to objects and subjects in their environment. Information that can affect attitudes is highly dependent on the content, sources and information concerned (Morgan and King, 1974, Howard, 1975).

Sources of information are very influential in developing attitudes. Apart from information from textbooks, perhaps from empirical facts, lecturers are also a source of learning. The quality of information sources greatly influences the growth of student confidence. In addition, lecturers also have a strong role in fostering attitudes, because lecturers communicate directly and are at the same time a preference for students. The expected learning model requires a variety of information sources. With various sources of information, students can make choices according to their

interests, motivations and talents. In this way students can find for themselves the knowledge and information that they will use to analyze situations and facts to obtain values that are useful for their lives.

The findings of this study are supported by Merrill Pysicall (1995) who reports that the results of research that show the success of technology-based Problem Based Learning are those that develop a positive attitude, increase awareness of differences of opinion, and increase the ability to solve problems.

It cannot be denied that the technology-based Problem Based Learning model can shape students to work on authentic problems with the intention of compiling their own knowledge, developing inquiry and higher-order thinking skills, developing independence and self-confidence ". This finding is supported by previous research, among others, by Bekti Wulandari (2013) Herman DS (2013), several studies that show that the benefits of technology-based Problem Based Learning for students have an influence on student learning outcomes.

So it is suggested that the role of lecturers is very important with suitable learning methods in accordance with competency standards and basic competencies that are in the adaptive entrepreneurship curriculum. So that in this finding it can be seen that there is an effect of the Problem Based Learning model on entrepreneurial attitudes at STKIP PGRI Jombang.

Based on the results of the multiple linear regression test, it shows that there is an effect of the Problem Based Learning model, learning methods, motivation on entrepreneurial attitudes. This shows that the learning process of a lecturer can use the Problem Based Learning model in various groups of students both for students whose learning methods are very efficient, efficient, quite efficient, inefficient or very inefficient, motivation is very high, high, medium, low and very low. In other terms, the use of the Problem Based Learning model in the learning process is based on the learning method and the level of student motivation, especially for STKIP PGRI Jombang students. In fact, it is expected that the use of the Problem Based Learning model can improve learning methods and learning motivation which in turn can improve students' entrepreneurial attitudes. Therefore, the use of the Problem Based Learning model in this study has a positive impact on students' entrepreneurial attitudes. So it is suggested to use the Problem Based Learning model after knowing how to learn and student learning motivation with the hope that the use of the Problem Based Learning model can be optimal and ultimately the learning process can be effective and efficient.

The results of the analysis show that the multiple linear regression model shows an R Square of 0.195 or 19.5%, this means that entrepreneurial attitudes in the Economic Education Study Program of STKIP PGRI Jombang are influenced by the use of technology-based Problem Based Learning models, learning methods, learning motivation by 19.5%.

These findings prove that the entrepreneurial attitude of students is simultaneously influenced by the use of the technology-based Problem Based Learning model, learning methods and learning motivation (especially entrepreneurship learning) in the Economic Education Study Program of STKIP PGRI Jombang. Optimally, it is recommended to pay attention to the learning method and the level of student learning motivation, while the R Square which cannot be explained by the multiple linear regression model is (100% - 19.5%) = 80.5%, meaning that 80.5% of the achievement of student entrepreneurial attitudes is not influenced by the use of the Problem Based Learning model, learning methods and learning motivation levels are thought to be influenced by other factors such as the ability of lecturers to teach, school environmental conditions, talents, stimuli or stimulants of students, socioeconomic conditions, students' initial abilities and no less important. parents towards the education of their son and daughter. Therefore, in addition to the use of the technology-based Problem Based Learning model, learning methods and learning motivation need to be examined for the relationship of these factors with the attitudes of student entrepreneurial achievement in entrepreneurship learning, especially in the Economic Education Study Program of STKIP PGRI Jombang.

## 6. Conclusion and Suggestion

#### **6.1 Conclusion**

There is a partial and simultaneous influence on the use of technology-based PBL Learning Model, Learning Method, Learning Motivation on the entrepreneurial attitude of students in the Economic Education Study Program of STKIP PGRI Jombang.

#### **6.2 Suggestion**

Based on the conclusions of the research results as mentioned above, several suggestions can be made as follows:

- 1. The use of technology-based PBL learning models can improve student entrepreneurial attitudes, preferably higher education institutions, especially the economic education study program STKIP PGRI ombang, as far as possible can improve the teaching and learning process by using the technology-based PBL Learning Model so that the teaching and learning process can be achieved optimally and students can be active, creative and innovative
- 2. The level of student learning motivation and student learning has an influence on entrepreneurial attitudes in entrepreneurship learning, especially in the economic education study program STKIP PGRI Jombang, so it is suggested that at the beginning of learning it is necessary to know the level of learning motivation and student learning methods for the materials to be taught with giving initial questionnaire. By knowing the level of student learning motivation and student learning methods, then the form of learning can be selected (both models, media, systems, etc.) in accordance with the hope of encouraging student study groups in the learning process, especially student study groups who have low motivation and lack of learning methods. efficient, so that learning objectives can be achieved optimally.
- 3. Because factors such as the ability of the lecturer to teach, social environmental conditions, socio-economic conditions, student background, students' initial abilities are factors that have not been researched by researchers and this is the weakness of the researcher, it is suggested that further researchers conduct further research on factors -these factors.

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