CHAPTER I
INTRODUCTION

A. BACKGROUND

The concern of education is not only to develop students in an academic approaches, education also acts as a path for students to be able to compete in real-world competitions. Hence, schools need to prepare students to have the skills which are required in a global competition. One of the skills which have become a major concern nowadays is creativity. According to the report of Future Jobs World Economic Forum (2016), the 10th rank in 2015 for one of the most required skill by the world is creativity. This rank from 2015 is predicted to change in 2020 according to the data of the same report by Future Jobs. Creativity will be at the top three of the world's most required skill. This shows how important developing students' creativity in school. The problem is, according to The Global Creativity Index 2015, Indonesia was placed in the 115th rank in the terms of global creativity index among 139 countries in the world (Florida et al., 2015). Beside that ACT of Republic of Indonesia also consider about the students' creativity in Indonesia.

ACT of the Republic of Indonesia Number 20 Year 2003 on National Education System states Education means conscious and well-planned effort creating a learning environment and learning process so that learners will be able to develop their full potential for acquiring spiritual and religious strengths, develop self-control, personality, intelligence, moral and noble character and skills that one needs for him/herself, for the community, for the nation, and for the State. According to ACT of the Republic of Indonesia Number 20 Year 2003 in Chapter II article three about function and aim of the National Education state that the National Education functions to develop the capability, character, and civilization of the nation for enhancing its intellectual capacity, and is aimed at developing learners' potential so that they become persons imbued with human values who are faithful and pious to

one and only God; who possess morals and noble character; who are healthy, knowledgeable, competent, *creative*, independent, and as citizens, are democratic and responsible. Student in Indonesia should be creative and have creativity skill. Therefore, Indonesia education needs appropriate instruction of learning which resulting how to get the knowledge and how to increase the students' creativity.

Having a creative aspect, means having the ability to express one-self in his own self (Stenberg, 1999). While Torrance (1995) believed that the scientific process starting from; forming ideas or hypotheses, testing hypotheses, and communicating the results; is a part of creative thinking itself. This means, creativity is evident in a number of diverse learning contexts. Creativity exists at every single step of learning process and therefore not only centered in a single particular way.

In the context of learning by Contextual Teaching Learning (CTL), the students are required to analyze, synthesize, solve problem and make decision by considering all of the things with logical facts (Johnson, 2002). They need to make meaningful connections while doing significant work in a self-regulated learning process. Working together within a group through collaborating ideas is also a part of CTL. It can be seen that CTL has a lot of scientific process which can be used to address creativity.

In addressing creativity, Crawford (2001) believed that the strategies of CTL such as *Relating* means connect the materials of the subject with daily life phenomenon, *Experiencing* means students are able to gain the real experience in the class from the phenomenon, *Applying* means students are able to apply the content of subject in real life, *Cooperating* means students are able to cooperate with other students in the class and *Transferring* means students are able to share their new knowledge after the activity of learning process. By applying this strategies will triggers the students to express their creativity. Through using CTL frequently in the classroom, teacher helps students by triggering students' creativity in each scientific process they went

through. Using CTL in the classroom means allowing students to express their creativity in the learning process.

The topic of Newton's Third Law of Motion was selected because it can be easily connected by secondary level students in their daily life activity so they will be easy to conduct the activity in the class. Through choosing an easy topic for the students, it is expected that the students will easily express their creativity in the learning process so that the result can be observed clearly.

CTL has proved to have a positive effect towards students' knowledge, understanding, achievement and better meaningful learning. However, little research has been made to investigate students' creativity in CTL's implementation. Based on the concerns above, the researcher decided to investigate students' creativity in CTL in learning Newton's Third Law of Motion.

B. RESEARCH PROBLEM

The research problem of this study is "How is Students' Creativity in the Implementation of Contextual Teaching and Learning (CTL) in Learning Newton's Third Law of Motion?"

C. RESEARCH QUESTIONS

Elaborating the research problem, the research attempts to explore the following questions:

1. How is the implementation of Contextual Teaching and Learning (CTL) in learning Newton's Third Law of motion?
2. How is students' creativity in the implementation of Contextual Teaching and Learning (CTL) in learning Newton's Third Law of motion?
3. How is Students' response in the implementation of Contextual Teaching and Learning (CTL) in learning Newton's Third Law of Motion?

D. LIMITATION OF PROBLEM

In order to make the research become more focused, the problem is limited as follow: (definition based on expert)

1. The Contextual Teaching and Learning (CTL) applied in this research was based on Crawford's strategies in 2001. There are some systematically procedure that should be conducted by teacher. Crawford called it R-E-A-C-T (Relating, Experiencing, Applying, Cooperating, and Transferring)
2. The students' creativity applied in this research was based on the product that they create that measure using CPAM (Creative Product Analysis Matrix) by Bessemer and Treffiger. The indicators are novelty, resolution, and Elaboration & synthesis.
3. Newton's third law topic used in this study as the measurement is Newton's law that written in Competency Standard No. 5 and Basic Competence No. 5.2 that is attached in 2006 Curriculum. The topic focuses on Newton's third law.

E. RESEARCH OBJECTIVES

This research objectives are specified as follow as:

1. To investigate the implementation of Contextual Teaching and Learning (CTL) in learning Newton's Third Law of motion.
2. To profile students' creativity in the implementation of Contextual Teaching and Learning (CTL) in learning Newton's Third Law of motion.
3. To profile students' response the implementation of Contextual Teaching and Learning (CTL) in learning Newton's Third Law of motion.

.

F. SIGNIFICANCE OF RESEARCH

The results of this research are expected to provide the following benefits:

1. For students: CTL will give new learning experience, the implementation of CTL is expected to profile students' creativity and students' response.

2. For teacher: CTL can be used as innovative way to deliver concept in learning process, furthermore in curriculum 2006 CTL is suggested to be implemented.
3. For other researcher who has same focus study, it is expected to give reference for further study

G. ORGANIZATION STRUCTURE OF RESEARCH PAPER

In order to get organized structure of paper, this research paper is arranged based on the following organization structure:

1. Chapter I: Introduction

   This chapter describes about the background and problem proposed as well as its limitation of the research. This also explains the purpose of the research and also the relevant of the research in the same field of study.

2. Chapter II: Literature Review

   This chapter explaines literatures and supportive theories or reference of the research. The basic explanation of students' creativity, how to measure, and the meaning of concept that is used on experiment of Newton's third law.

3. Chapter III: Methodology

   This chapter explaines about research methodology, how the data are being collected, the instruments used, and the research plot.

4. Chapter IV: Result and Discussion

   In this chapter, the product of test instrument and interpretation of all of the research data are served. Then the discussion are followed after, it analyses the result of research and its correlation between the result and the theories.

5. Chapter V: Conclusion and Recommendation

   This is the last chapter of this research, all of research questions are concluded based on the result. The suggestion that comes from

difficulties and obstacles found in this research are shared in recommendation part.