

# CHAPTER I

## INTRODUCTION

### A. Background of Problem

Students alike preparing for the real world need to be educated in a way that will lead them to the path of life-long learning. In order to help students reach this path, educators are encouraged to give their students the skills necessary to become life-long learners. Teaching methodologies vary greatly from teacher to teacher, grade to grade, district to district, and even from classroom to classroom. There are countless strategies available for teachers to use in order to effectively teach a lesson. The choice is basically left in the hands of the educator as to which strategy is most appropriate to use and at what time to use it in order to develop proper skills.

Cooperative learning is one of successful teaching model in which small teams, each with students of different levels of ability use a variety of learning activities to improve their understanding of a subject. Each member of a team is responsible not only for learning what is taught but also for helping teammates, thus creating an atmosphere of achievement. Students work through the assignment until all group members successfully understand and complete it.

There are many types of cooperative learning strategies; one of them and the one that discussed in this paper is Think – Pair – Share strategy. The use of the Think – Pair – Share strategy has been observed across the spectrum of educational settings from primary to tertiary levels. This strategy, first developed by Lyman in 1978 ” (McTighe & Lyman in Adebola & Sunday 2013; Bookman, *et al.*2001;Carss, 2007; Goodman, 2010; Kothiyal *et al.* 2013; Rahvard, 2010;) is still valued after nearly 30 years as a teaching strategy which fosters cooperative learning.

Think – Pair – Share Instructional Strategy is a cooperative learning strategy that can be also belongs to the group of strategies called inquiry based learning strategies. It derived its name from the three stages of learners’ actions while implementing the strategy, with emphasis on what learners are expected to do at each of the stages. Think – Pair – Share added the peer interaction element of collaborative learning, the idea of wait

or think time, which has been demonstrated to be a powerful factor in improving students' response to questions. The process commence with the teacher giving out a problem or asking an open ended question to which there may be variety of answers. The teacher then gives learners 'think time' and directs them to think about the question and how to answer it. During the think time, learners turn to their learning partners and work together, sharing ideas, discussing, clarifying and challenging one another towards arriving at a reasonable answer. The Think – Pair – Share strategy implementation has recommended characteristics, such as; students working in small groups, expressing their reasoning and receiving prompt feedback, those show significant main impact on the students' achievement scores in science lessons. A major instructional implication of Think – Pair – Share is a suitable strategy to use for science teaching and learning that intend to incorporate critical thinking in active learning techniques in the courses.

Usually the lecture format of learning is a venerable and popular approach to content delivery in higher education; however, it frequently does not encourage active learning or critical thinking on the part of students. Those new to the teaching profession often adopt the lecture format because it is both teacher-centered and comes with a strong academic tradition. Unfortunately, it is very difficult to increase a student's critical thinking skills with the lecture format. Topics are discussed sequentially rather than critically, and students tend to memorize the material since the lecture method facilitates the delivery of large amounts of information. The student is placed in a passive rather than an active role since the teacher does the talking, the questioning, and, thus, most of the thinking stated Maiorana in Duron *et al.* (2006).

Active learning can make the course more enjoyable for both teachers and students, and, most importantly, it can cause students to think critically. Critical thinking requires the component interdependent competencies of evaluating the credibility of sources, analyzing the quality of arguments, making inferences using reasoning, and making decisions or solving problems (Rosen & Tager 2013). Critical thinking often appears in Program for International Student Assessment (PISA) and US National Assessment of Educational Progress (NAEP) in assessment of science, math and reading. Critical thinking was part of problem solving assessment in PISA (2012), with major

emphasis on evaluation of the available information, assumptions, and possible solutions, as well as looking for additional information or clarification (OECD, 2010).

Higher order critical thinking skills is increasingly necessary for success in students' educational learning process. Where critical thinking is exercising or involving careful judgment or evaluation, as an example; judging the feasibility of an idea or product. Critical thinking is a very important skill to develop. We may ask students to analyze and understand so many things in classroom activity. Students' ability to think critically will be a valuable tool to use it in the future.

It was mentioned by Indonesian Ministry of Health in 2007, accurate data on the number of drug injectors in Indonesia are difficult to obtain due to the clandestine and illegal nature of drug use. However, the Indonesian National Narcotics Board has estimated there are 1.3 to 2 million drug users, of whom 1 million inject drugs; this latter group now represents the biggest number of new HIV cases in highly affected populations (Sudirman & Doreen, 2009).

Specifically for this paper, research will be attempted to determine critical thinking skills and changes of students' ideas at each phase of Think – Pair – Share strategy in learning Addictive and Psychotropic substances.

## **B. Research Problem**

The problem of this research paper as it almost explained in background of the problem is: “How do critical thinking skills and changes of students' ideas happen at each phase of Think – Pair – Share strategy in learning Addictive and Psychotropic substances?”

## **C. Research Questions**

In order to gather more data this paper will address the following specific questions, such as:

1. How does Think – Pair – Share strategy contribute to students' critical thinking skills in learning Addictive and Psychotropic substances?

2. How students' ideas changes at each phase of Think – Pair – Share strategy in learning Addictive and Psychotropic substances?

#### **D. Research Objectives**

Based on research problem and questions above there are some objectives of this study above:

1. To describe students' critical thinking skills in learning Addictive and Psychotropic substances by implementing Think – Pair – Share strategy.
2. To investigate changes of students' ideas at each phase of Think – Pair – Share strategy in learning Addictive and Psychotropic substances.

#### **E. Limitation of Problem**

To avoid misunderstandings and misconceptions about this study, research consists of following limitations:

1. Think – Pair – Share is one of cooperative learning strategies that implemented by teacher during teaching process in a classroom. This strategy consist of three stages, where teacher able to inform students in each of stage about its' changing. Students are able to think individually in “Think” stage, discuss together with partner in “Pair” stage and share their opinion in front of the class in “Share” stage.
2. Critical Thinking is learning to think independently and to develop own opinions supported by existing evidence. There are 6 performance elements or in other words criteria measured by critical thinking skill in this paper those are: Communication, Analysis, Problem Solving, Evaluation, Synthesis, and Reflection.
3. Change of students' ideas in this study formulate changes of students' ideas during implementation of Think – Pair – Share strategy. In each of Think – Pair – Share strategy phases student's ideas would be captured into worksheet to perform up each of student's idea changing.
4. Addictive and Psychotropic Substances topic should be learned by Junior High School students because Indonesia categorized as a country with high level activities of drug dealers. Besides narcotics, psychotropic and addictive substances, their

derivation, types and affect to human body concepts should be delivered to students during Junior School because this topic is part of National Curriculum of Indonesia.

## **F. Research Benefit**

This research hopefully may help to each researcher, teachers and students by following benefits.

1. For teachers, it could improve teacher's teaching process by using Think – Pair – Share strategy or even other types of cooperative learning. Besides using certain strategy could help teacher to deliver topic easily and in such interesting way to students. In addition, by improving students' critical thinking, teacher help both students and him or herself with having well-developed students and good condition in the class.
2. For students, the implementation of cooperative learning in classroom may improve their communication skills, while implementation of certain strategy such as, Think – Pair – Share give positive effect not only for the one who always active in class but also for passive ones, the one who shy to answer teacher's question. Also this strategy increase students' acceptance and commitments besides, it utilized students' knowledge and experience. While critical thinking may give many positive effect, not only on student's thinking skills but also student become open-minded, flexible, and has a desire to be well-informed. Also student may understand diverse viewpoints, and willing to both suspend and to consider other perspectives.
3. For other researches, to enhance the continuous of this research, the implementation of Think – Pair – Share strategy within different topic, else than Addictive and Psychotropic Substances. However, it also could be as continuously of this research paper with same variables but in this case with experimental form of research method, that could give more information in have a difference of implementation certain strategy or either improving students' critical thinking skills. While variable such, critical thinking skills might be contribute with other criteria those used in this research.

## G. Operational Definitions

Operational definitions in this research paper those are going to be describes are: the strategy that used in classroom or Think – Pair – Share and skills that is going to be measured that students' critical thinking skills.

1. Think – Pair – Share is one of the instructional strategies that foster cooperative learning and which allow students to work together to complete a task. It typically consist of three stages, those are: a silent thinking time following the posing of a question, sharing with a partner which allows for the sharing and refinement of ideas, and sharing back to larger group. There is an observational sheet used in order to measure did certain strategy applied or implemented during teaching process or not.
2. Critical Thinking skills could be defined as investigation whose purpose is to explore a situation, phenomenon, question, or problem to arrive at a hypothesis or conclusion about it that integrates all available information and that therefore can be convincingly justified. It will be measured by worksheet that was done based on The Assessment Rubric for Critical Thinking Skills (ARC).
3. Changes of students' ideas refer to students' conceptual change or rather to exchange of ideas; in other words, the process of a student exchanging one idea for another is conceptual change. It will be measured by worksheet test during teaching learning process.