



THE STUDY OF THE 8TH GRADE STUDENTS' LEARNING IMPROVEMENT IN HUMAN BODY SYSTEMS AND THEIR DEVELOPMENT OF THE 21ST CENTURY LEARNING SKILLS BY APPLYING PDCA LEARNING APPROACH

JAKKAPAN PRATUMTEEP
Chevron Enjoy Science,
Talat Yai Wittaya High School

INTRODUCTION

The education in the 21st century aims at developing the learners to have important skills in order to be efficiently adapting to the changing world. Thus, in order to enhance students' skills in learning in the 21st century, the design of learning process in science should be taken into account. The researcher decided to study the result of students' achievement and working process hoping to scale up the learning skills necessary for the 21st century task force; particularly through implementing a set of activities based on Plan-Do-Check-Act (PDCA) procedures. These activities were anticipated to perfectly enhance the seven students' learning skills in the 21st century; namely: a.) Critical Thinking, b.) Creative Thinking Skills, c.) Team Work Capability, d.) Communication Skill, e.) Computer and Technological Skills, f.) Professional and Life Skills and g.) Learning Skills

OBJECTIVES

- (1) To compare the achievements of the 8th Grade students in learning basic science course on Human Body System by providing a set of activities based on PDCA process.
- (2) To enhance the working process in studying basic science course on Human Body System aiming at developing learning skill in the 21st century.

METHOD

The research methodology consisted of:

- (1) The plan in teaching the basic science course on Human Body System by using a set of activities based on PDCA quality enhancement process.
- (2) The questionnaire to evaluate the students' performance before and after studying the basic science course on Human System.
- (3) The form used to observe seven learning process skills of the 21st century during the study of the basic science course on Human Body System by using a set of activities based on PDCA process.

THE METHOD OF ANALYZING INFORMATION

- 1. Analyze data by using the average value (x).
- 2. Calculate the standard deviation (t).
- 3. Analyze the efficiency of a set of activities based on PDCA process.

RESEARCH OUTCOMES

- (1) According to the statistical comparison, the students significantly showed 0.5 higher performance after attending in activities based on PDCA process in studying the basic science course on Human Body System.
- (2) The index efficiency showed the result of 0.85 which implied that the students had 85% higher performance after attending in activities based on PDCA process in studying the basic science course on Human Body System.
- (3) The average value of students in developing skills in learning process of the 21st century was 83.14.

CONCLUSION

After the study through the PDCA process aiming at developing the learning skill of the 21st century, it was found that the students showed their higher performance after the class. This concluded that the students were able to successfully work as a team by clarifying their responsibilities and cooperating harmoniously. They also were able to develop their considerable thinking process resulting them to efficiently compare, classify and enhance the learning development. Furthermore, they showed the evolution in creative thinking and thinking out-of-the-box that led them to use their thoughts in developing and in improving their work and working process creatively and productively.



References

- Beers, Sue. Teaching Twenty First century Skills : an AS CD / Sue Z. Beers. p.cm. Includes bibliographical Reference.
- 21st century Skills : Learning for life in Our Times by Bernie Trilling and Charles Fadel
- Wichan Panich. (2012). The Way to Enhance Learning for the Students in the 21st Century: Sodsri-Saritwong Foundation, Bangkok
- _____. (2002). The Document for Basic Education Curriculum B.E.2544 (2001)
- The Manual of Management in Learning Science. Bangkok. Express Transportation Organization of Thailand
- Sukhothai Thammathirat Open University.(2001). Theory and Practical Guideline in Education Management (3rd Edition). Bangkok: Author.
- Vorrapat Phucharoen.(2007). Systematic Thinking & Problem Solving Techniques. Samlada Ltd.