1. Introduction

The learning of the students in 21st Century is that each student participates in the learning, both in reality world and in digital world. The student requires information in digital learning environment. The students like to work together and are independent; they apply entertainment and innovative, they have high expectation, they are good at expressing opinions, they are honest, they work together happily, and they are creative. This is the change of learning in Thai society to be of good quality and up-to-date.

The learning process management requires the management of contents and activities to be consistent with the students' interest and aptitude, considering on the differences among persons, the practice of skill, the thinking process, and managing process, the facing with the situation, and the application of knowledge for the prevention and for solving problems, managing activities for the students to learn from real experience, to practice real work, with the promotion of the learning climate and environment and learning media.

Although the education has come to the learning era of 21st Century, the current instructional package still play in important role; they are also developed in forms of contents and forms and the presentation method.

The development of current instructional package requires different forms and contents and presentation method in form of electronic media, electronic book, electronic publications. Therefore, the learning media is important to help educational institute to manage the learning and teaching to achieve the objectives of the curriculum. Media is the tool for learning, for disseminating knowledge and understanding, and for increasing skill and experience, for building learning situation, for stimulating thinking skill. Managing instruction to promote the development of the students must open chance for students to take part in the learning as much as possible.

Applying Virtual Classes in the instruction leads to the response to learning of the students, for sharing knowledge, expertise, and skill. The Virtual Learning Form is changed to many forms especially the one called Augmented Reality Technology. Feng Zhou defines it as the technology using computer to create virtual pictures, the pictures created would be overlapped with the physical objects in real time; this is different from virtual reality (VR) that is only to create pictures in digital form; the user can access to the more complete virtual environment and can respond to the virtual pictures created by real objects in real world.

According to the role of Augmented Reality Technology as mentioned, when used with the learning based on development of the Augmented Reality Technology, it can be used in the normal, face-to-face instruction. The students can use thinking process, language, non-verbal language, or other kinds of communication while learning in the Augmented Reality Technology.

2. Objectives

1. To study elements of the instructional package together with the Augmented Reality Technology

2. To develop instructional package by the Augmented Reality Technology under studied elements
3. To compare the students' achievement before learning and after learning by using the Augmented Reality Technology
4. To study into opinions of the students towards instructional package using the Augmented Reality Technology

3. Scope of the Research Project

Scope on data source used in the research can be divided into 2 groups as follows:
1. Form development stage:

- The experts on educational technology are the ones with educational degree in the educational technology of Ph.D. level, have teaching experience in the educational institute, and are involved in the education for not less than 3 years, for 3 persons; the experts would consider the forms of instructional package together with the Augmented Reality Technology created by the researcher.

- The experts on research, on curriculum and teaching, have educational degree in research and assessment for the education, or the instruction curriculum in Ph.D. level, have teaching experience in the educational institute, and are involved in the education for not less than 3 years, for 3 persons; the experts would consider the forms of instructional package together with the Augmented Reality Technology created by the researcher.

2. Experimental stage

The researcher specifies data sources for experiment including 10 fourth-grade students from Wang Itog School, who study in Semester 2 of 2012 by purposive sample.

The scope of contents and tools used in development consist of

1. Contents: it is about five major means in occupational group, of primary education. Inside the learning set, there has been a preparation for activities, media used and tests used for assessment. Contents consist of five major meals including carbo hydrate, protein, lipids, vitamin, minerals, and water.

2. Tools and programs used consist of:
    2.1 Personal Computer
    2.2 Webcam connected with computer on USB
    2.3 Three-dimensional piece of work development application, Google SketchUp
    2.4 Augmented Reality Tool

4. Tools used in the research

The research on the instructional package together with the Augmented Reality Technology has tools as follows:
1. Instructional package together with the Augmented Reality Technology
2. Assessment Form of instructional package together with the Augmented Reality Technology
3. The instructional package together with the Augmented Reality Technology
4. The Assessment Form of instructional package together with the Augmented Reality Technology

5. The questionnaire into the opinions of students towards the instructional package together with the Augmented Reality Technology

5. Methodology

The methodology is as follows:

5.1 The processes for developing the instructional package together with the Augmented Reality Technology are as follows:

- Study and have a field trip: the research studies and searches from documents, books, journals, researches, and various sources to be guideline for conducting research, to specify concept, framework, and method, to analyze contents, to be guideline in determining the framework for the development of the instructional package together with the Augmented Reality Technology

- Perform the analysis in order to obtain the form of the instructional package together with the Augmented Reality Technology. This stage of research is to bring data in the process of studying document to be analyzed in order to find appropriate patterns with 3 aspects of elements including contents, techniques, and presentation.

- Present the form of the instructional package together with the Augmented Reality Technology by questioning 3 experts on educational technology

- Create the archetype of the instructional package together with the Augmented Reality Technology for 3 experts on educational technology and on the primary management of instruction to assess the archetypes of the instructional package together with the Augmented Reality Technology

5.2 The stage for the experiment and comparison of achievement and opinions of students towards the instructional package together with the Augmented Reality Technology

- After obtaining the instructional package together with the Augmented Reality Technology that is appropriate under the recommendation of experts and from the experiment, then test the learning achievements and assess into the opinions towards the instructional package together with the Augmented Reality Technology

- Instruction stage consists of:

Preparation stage: Divide students into groups, the group to be studied would be divided under the willingness of students for 2 persons per group, for 5 groups, and suggest on the rules of the group, the duties and role of the members, inform of the objectives and activities

Teaching stage: Introduce the instruction lessons, do pretest, suggest on content, suggest on the instructional package together with the Augmented Reality Technology, and assign work to each group

Group activities performing stage: Students learn together in the group, each group has roles and duties as assigned from the study in the instructional package together with the Augmented Reality Technology, the research would observe

Examination of work and test stage: Examine the work of students, test for the performance as assigned, focusing on the examination of the work of each group and each person

Lesson conclusion and assessment of performance stage: The teacher and students help conclude on the lesson and do posttest

- After completing the instruction and measurement for the achievement, then do the questionnaire and express opinions and interview the students, under the frame

of questions in the questionnaire for the opinions of the students towards the instructional package together with the Augmented Reality Technology to reflect the feelings of students towards the instructional package together with the Augmented Reality Technology.

6. Conclusion on the result of the research

1. The form of the instructional package together with the Augmented Reality Technology is in appropriate criteria consisting of 1) teacher's manual, 2) student's manual, 3) lesson's content, 4) test, 5) media of the Augmented Reality Technology, 6) presenting three dimensional pictures, 7) form of marker, 8) other qualifications of the instructional package

2. It is found from the result of the development of the instructional package together with the Augmented Reality Technology under elements studied that the result of assessment from the expert is in the most appropriate level in all elements.

3. It is found from the study into the comparison of the learning achievement before learning and after learning of the samples using the instructional package together with the Augmented Reality Technology that the achievement after learning is higher than that before learning with statistical significance of .05 level.

4. Samples have opinions towards the instructional package together with the Augmented Reality Technology in that they like novelty and they are interested in the instruction while learning. They enjoy at learning, the contents presented are interesting, beneficial, and not too difficult, the students have a chance to take actions in performing activities by themselves, they are independent in choosing learning contents

7. Discussion

From the study into the instructional package together with the Augmented Reality Technology, research results can be discussed as follows:

1. In developing the instructional package together with the Augmented Reality Technology, the researcher has studied the design of instructional package and concept and the Augmented Reality Technology from documents and research concerned. And the researcher has studied the concept, theory of learning concerned to be the guideline in the development to be consistent with the process to make the students change their behavior, thinking, and ca learn by using the Augmented Reality Technology. It is found that the form of the Augmented Reality Technology consists of) teacher's manual, 2) student's manual, 3) lesson's content, 4) test, 5) media of the Augmented Reality Technology, 6) presenting three dimensional pictures, 7) form of marker, 8) other qualifications of the instructional package, are forms that can developed and used in the instruction; this is consistent with the concept of Kapfer & Kapfer stating that the instructional package is the form to communicate between the teacher and the students, consisting of suggestions for the students to perform learning activities, resulted from learning by instructional package. The form of the instructional package together with the Augmented Reality Technology that is developed can be used for instruction for group activities and self-study as well

because in each element, there are sub-elements showing the details and procedures for applying instructional package appropriately.

Besides, in the study into the elements in the Augmented Reality Technology, the researcher has brought the concept and the development of the Augmented Reality Technology, its application, tools concerned, to be guideline in ordering details in each element in the Augmented Reality Technology that must be developed to be instructional package, especially on the Augmented Reality Technology, three-dimensional pictures, Marker's pattern.

2. It is found from the result of the development of the instructional package together with the Augmented Reality Technology under the studied elements that the assessment result from the experts is at most appropriate level in all elements; this is because the development of the instructional package together with the Augmented Reality Technology is under the forms of various elements studied by the researcher because the Augmented Reality Technology can be applied with other technologies concerned in learning of the students, and can provide information to the students immediately, the students can have new experience by virtual dimension, and the students can learn together, the teacher build and boost the knowledge for the students through demonstration, conversation. The learning form would change to be more of the Augmented Reality so that the students can have experience and can link contents to the specific place or objects that are appropriate with the contents learnt from three-dimensional pictures, leading to the extension of learning to be outside the class room more, and promoting the learning from the old form. And in some cases, the Augmented Reality Technology can be combined with other forms of learning; this is consistent with Kaufmann, Hannes stating that in applying the Augmented Reality Technology in the instruction, the activities development should be designed first before actual learning, by determining the exact role of teacher that would reflect the varieties in constructing knowledge.

3. It is found from the result of the study into the comparison of the learning achievement before learning and after learning of the samples using the instructional package together with the Augmented Reality Technology that the achievement after learning is higher than that before learning with statistical significance of .05 level. This is because the development of the instructional package together with the Augmented Reality Technology is done under the form of each element developed by the researcher, being based on the principles of educational theories to be elements in the creation. The psychological principle is based in the instruction as well. Therefore, the creation of the instructional package together with the Augmented Reality Technology that is based on the theory would help the instructional package created to be more efficient for the instruction. This is consistent with Kapfer & Kapfer stating that the instructional package is the form to communicate between the teacher and the students, consisting of suggestions for the students to perform learning activities, resulted from learning by instructional package.

4. Samples have opinions towards the instructional package together with the Augmented Reality Technology in that they like novelty and they are interested in the instruction while learning. They enjoy at learning, the contents presented are interesting, beneficial, and not too difficult, the students have a chance to take actions in performing activities by themselves, they are independent in choosing learning

contents, the pictures presented are similar to the real one, the size of the picture makes it possible to see the pictures easily and is appropriate for the computer monitor because the instructional package together with the Augmented Reality Technology developed is designed and developed and applied in the process studied systematically, making the students to be independent in seeing what they learn and can see things around, this affects the emotion and learning at the same time. Human learn through five senses of perceptions including eyes, ears, nose, skin, tongue, and experience with the Augmented Reality, this is to respond to the senses of perception through eyes and ears via the monitor and computer equipment.

Besides, teachers perform duties in designing and developing learning activities and explaining procedures concerned with the learning. Teachers do it systematically and manage the learning to have area for doing activities and learning, and searching and studying on one's own and with their group, together with the explanation from teachers and focus the students to learn by themselves under the specified contents and processes. Also, the students are to do it repeatedly with the suggestions from teachers. The students can manage the learning by themselves with the prior explanation on procedures and can record the conversation, talk, and can use the thinking process systematically, can provide suggestions to students themselves. There is a record of conversation and talk, and the use of systematic thinking process that make students understand their own knowledge structure. The design of the instructional package together with the Augmented Reality Technology encourages the students to take part in and to interact with three-dimensional pictures that are similar to those in their daily lives; so, it is to open more chance for new experience. Therefore, when users participate in the Augmented Reality, they would be motivated and would have continuous participation in learning activities.

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