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A Comparison of Learning Achievement of Assembled Material Instruction and Traditional Instruction for Prathomsuksa 6 Students

การศึกษาเปรียบเทียบผลสัมฤทธิ์ทางการเรียนสาระทัศนศิลป์ ของนักเรียนชั้นประถมศึกษาปีที่ 6 โดยการสอนแบบ ใช้เอกสารประกอบการเรียนและการสอนแบบปกติ

ชวลา ศาลิโกเศศ

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บทคัดย่อ

การศึกษาค้นคว้าครั้งนี้มีความมุ่งหมาย เพื่อเปรียบเทียบผลสัมฤทธิ์ทางการเรียน สาระทัศนศิลป์ ของนักเรียนชั้นประถมศึกษาปีที่ 6 ระหว่างกลุ่มที่เรียนโดยใช้เอกสารประกอบการเรียนและกลุ่มที่เรียนโดยการสอนแบบปกติ ประชากรที่ใช้ในการวิจัยครั้งนี้ เป็นนักเรียนชั้นประถมศึกษาปีที่ 6 โรงเรียนรัตนโกสินทร์ ๙ สำนักงานเขตพื้นที่การศึกษาสมุทรปราการ เขต 2 ภาคเรียนที่ 1 ปีการศึกษา 2551 จำนวน 4 ห้องเรียน รวมจำนวนนักเรียน 160 คน ซึ่งจัดชั้นเรียนแบบคละชั้นโดยมีเด็กเก่ง ปานกลาง และอ่อน แบ่งเป็น กลุ่มทดลอง จำนวน 2 ห้องเรียน รวมจำนวนนักเรียน 80 คน และเป็นกลุ่มควบคุม จำนวน 2 ห้องเรียน รวมจำนวนนักเรียน 80 คน เครื่องมือที่ใช้ในการวิจัย ประกอบด้วย เอกสารประกอบการเรียน สาระทัศนศิลป์ หน่วยที่ 1 การเขียนภาพระบายสี ชั้นประถมศึกษาปีที่ 6 แผนการสอนแบบปกติ หน่วยที่ 1 การเขียนภาพระบายสี ชั้นประถมศึกษาปีที่ 6 และแบบทดสอบวัดผลสัมฤทธิ์ทางการเรียน ก่อนและหลังเรียน สาระทัศนศิลป์ หน่วยที่ 1 การเขียนภาพระบายสี ชั้นประถมศึกษาปีที่ 6 นำไปทดลองใช้โดยผู้วิจัยเป็นผู้สอน วิเคราะห์ข้อมูลโดยการหาค่าเฉลี่ย ค่าเบี่ยงเบนมาตรฐาน ค่าร้อยละ หาประสิทธิภาพของสื่อ ค่าความยากง่ายของแบบทดสอบ ค่าความเชื่อมั่นของแบบทดสอบและค่าวิกฤต $t - test$

การศึกษาพบว่า

1. ผลสัมฤทธิ์ทางการเรียนของนักเรียนที่เรียนโดยใช้เอกสารประกอบการเรียนกลุ่มสาระการเรียนรู้ศิลปะ สาระทัศนศิลป์ หน่วยที่ 1 การเขียนภาพระบายสี ชั้นประถมศึกษาปีที่ 6 หลังการทดลองสูงกว่าก่อนการทดลองอย่างมีนัยสำคัญทางสถิติที่ระดับ .01
2. ประสิทธิภาพของการใช้เอกสารประกอบการเรียนกลุ่มสาระการเรียนรู้ศิลปะ สาระทัศนศิลป์ หน่วยที่ 1 การเขียนภาพระบายสี ชั้นประถมศึกษาปีที่ 6 เท่ากับ 84.83 ซึ่งสูงกว่าเกณฑ์ที่กำหนดไว้คือ 80 / 80 โดยมีประสิทธิภาพเท่ากับ 85.01 / 84.83
3. นักเรียนที่เรียนโดยใช้เอกสารประกอบการเรียน กลุ่มสาระการเรียนรู้ศิลปะ สาระทัศนศิลป์ มีผลสัมฤทธิ์ทางการเรียนสูงกว่านักเรียนที่ได้รับการสอนแบบปกติ อย่างมีนัยสำคัญทางสถิติ ที่ระดับ .01
4. จากการศึกษาผลงานการวาดภาพระบายสีของนักเรียนที่เรียนโดยใช้เอกสารประกอบการเรียน ผู้เรียนมีการพัฒนาการด้านการเขียนภาพระบายสีสูงขึ้น

Abstract

The purpose of this research was to compare the learning achievement of Prathomsuksa 6 students learning through the visual arts assembled material instruction and traditional instruction. The subjects were Prathomsuksa 6 students from Rattanakosin IX School in the 2nd semester of the 2008 academic

year, Samut Prakan Education Office Area 2. They were 160 mixed ability students from 4 classrooms. They were assigned into 2 groups – the experimental and control groups. The experimental group consisted of 2 classrooms, 80 students, and the control group also consisted of 2 classrooms, 80 students. The instrument used in this study were visual arts assembled material Unit I – Color painting, lesson plans, and pre – post tests. The experiment was conducted by the researcher. The data were analyzed by arithmetic mean, standard deviation, percentage, and t – test. The efficiency of the assembled materials was analyzed through the difficulty value and the reliability of the tests.

The results of the study revealed as follow.

1. The learning achievement after the experiment of Prathomsuksa 6 students learning through the visual arts assembled material Unit I – Color painting was significantly higher than that prior to the experiment at .01 level.
2. The efficiency of the visual arts assembled material Unit I – Color painting – was 85.01 / 84.83 which was higher than the set criterion of 80/80.
3. The students learning through the visual arts assembled material instruction had significantly higher learning achievement than those learning through the traditional instruction at .01 level.
4. The students learning through the visual arts assemble materials had better development in painting.

Background

The education management in times of the educational reform requires the learners to learn how to learn, self – study, and be lifelong learners. This will provide the community, society, and the country with strong personnel to make progression to the society and economics; promote changing for the better human life; have beautiful mind, concentration, good physical and mental health; be able to live happily in the society. The Basic Education Curriculum B.E. 2544 had been developed in accordance with the Constitution of the Kingdom of Thailand B.E. 2550 and the National Education Act B.E. 2542. It requires the education management to be in accordance with the curriculum to develop Thai people to be perfect human in terms of physical, spirit, intellectual, knowledge and morality, having Thai ethics and cultures in their way of life; being able to live happily with others; providing opportunities for the community to participate in the education management; and continuously developing the learning strands and standards. (The Department of Curriculum, and Instruction. 2003: Introduction)

Ratanakosin IX School had 1,220 students, 30 teachers; required more 23 teachers. There were learning and teaching management problems: media/innovations were not sufficient to respond to the student needs as well as the visual arts learning achievement was not satisfactory. The researcher managed to solve the problems by making assembled materials on drawing and painting unit for Prathomsuksa 6.

As mentioned above, school and community must be partners in the education management in accordance with the learning process reform. With this regard, Prof. Dr.Prawase Wasi indicated “The learner’s life is the focus. Learning is to create wisdom, know oneself, know world, be self reliant in economics, spirit, and social, live together a balanced life, learn continuously, be happy, have fun and love learning. (National Institute for Learning Reform, Office of the National Education Commission. 2550: online).

Thus, the development of learning process is the important issue which teachers should study how to apply constructivism in learning management to promote the learner characteristics

of abilities to do, think, love reading, love knowledge, have morality, good values and desired characteristics. Details are as follow.

1. The learning outcomes focus on knowledge construction process. The learners have to practice knowledge construction by themselves.

2. The learning targets change from fixed transfer of learning substances to learning methods.

3. Learners have to learn from authentic experiences; implementing, studying, exploring, trial and error, until getting knowledge and understanding.

4. Learners use social interactions to cooperative learning and knowledge building.

5. Learners choose learning needs, set rules and regulations, are self – responsible and solve their learning problems.

6. Teachers change their roles from knowledge transformer to knowledge facilitators, assist learners in learning. The learning changes from providing learning to learners building knowledge.

7. Learning assessment take various and flexible methods (Pojana Sapsamarn. 2006: 6)

The arts learning strand encourages learners' creativity, imagination in art, beauty appreciation, aesthetics, valuableness, which affect quality of human life (Department of Curriculum and Instruction Development. 2003: 1). Therefore, the management of the arts learning strand, which is one of the learning strands, in the Basic Education Curriculum B.E. 2544, should focus on every learner having learning ability, self – learning ability, self development to their full potential, and learning activities which focus on learner centered which correspond with the following description.

Good learning emerges from building self – knowledge power by learners themselves. If learners have opportunities to construct knowledge and apply the knowledge in creating tasks with

the help of appropriate media and technology, it leads those thoughts into clear concrete actions. Whatever learners build in the world mean building knowledge in themselves. The knowledge which the learners build by themselves are meaningful to them, will last, and can well transform their understanding to other people. It will be the foundation for building new knowledge definitely. (Pojana Sabsaman. 2006: 6)

The visual arts strands and standards, which is a substance in the learning arts strand, is not less important than other substances. Visual arts learning is practicing thinking in relation with hands and creativity; solving work problems, practicing disciplines, loving beauty, perceiving aesthetics in various things, appreciating of visual arts tasks, being able to create tasks by one self. These contribute to self confidence and sense of pride, understanding of world cultures, love and persevering national works of art, and lead to conservation. Moreover, the visual arts helps relieve stress, economy, and is a good foundation for careers. These correspond to the learner qualities in the Basic Education Curriculum B.E.2544 which identifies as follow.

After completing the basic education in the arts strand, the learners would have beautiful mind, aesthetics, orderliness, critical perception, seeing value and significance of arts, nature, environment as well as arts cultural heritage, local wisdom and Thai wisdom. They could discover the potentiality of their interests which are foundation for further education or arts related careers, have imaginative visual arts, creativity, confidence in self development, creative expression, work concentration, discipline, responsibility, and ability to work happily with other people. (The Department of Curriculum, and Instruction. 2003: 3)

Ratanakosin IX School had managed the learning activities of the visual arts substance, arts learning strand in accordance with the Basic

Education Curriculum B.E.2544. It appeared that the existing media and learning innovations were not yet in accordance with the rapidly changing of the economical and social conditions as well as the growth of science and technology. It could not develop the quality of human to be knowledgeable, have skills and attitudes, be self-reliant and able to apply appropriate technology in the development of the quality of life. Teachers used traditional instruction, taking the roles of demonstrators; the students merely acted following the teacher orders. Thus, the management of the learning activities could not reach the identified goals. It might bring disadvantage to the learners and society. According to Section 24 of the National Education Act B.E. 2542 (1999), the guidelines for the management of education are as follow.

“Section 24 In organizing the learning process, educational institutions and agencies concerned shall:

(1) provide substance and arrange activities in line with the learners’ interests and aptitudes, bearing in mind individual differences;

(2) provide training in thinking process, management, how to face various situations and application of knowledge for obviating and solving problems;

(3) organize activities for learners to draw from authentic experience; drill in practical work for complete mastery; enable learners to think critically and acquire the reading habit and continuous thirst for knowledge;

(4) achieve, in all subjects, a balanced integration of subject matter, integrity, values, and desirable attributes;

(5) enable instructors to create the ambiance, environment, instructional media, and facilities for learners to learn and be all-round persons, able to benefit from research as part of the learning process. In so doing, both learners and teachers may learn together from different

types of teaching – learning media and other sources of knowledge;

(6) enable individuals to learn at all times and in all places. Co-operation with parents, guardians, and all parties concerned in the community shall be sought to develop jointly the learners in accord with their potentiality. (Office of the National Education Commission. 1999)

Ratanakosin IX School had applied the Section 24 as guidelines in the education management to reform learning in accordance with current economical and social conditions. The learning results of students, especially the visual arts in the arts strand, Prathomsuksa 6 were not satisfactory. This was due to the mark weight of the practice section was higher than that of the theory section. Teachers would focus on practices more than on learning content. The problems of the learning management activities of the visual arts in the arts strand, Prathomsuksa 6 as well as the study and analysis of data could be concluded as follow.

1. Teachers focused on practices, neglected teaching knowledge section, content and theories.

2. Some teachers used traditional teaching method, i.e. they were the sole demonstrator, students did not participate in the learning activities.

3. Teachers lacked knowledge and skills in applying innovations for visual arts instructions which was significant in helping students understand more easily.

4. Students lacked equipment for the visual arts learning. (Academic meeting minutes. 2008: 42)

The aforementioned problems hindered the potentiality of the students’ learning development of the visual arts, the arts strand. The learning results were not satisfactory. This was caused by the lack of media and innovations for knowledge transfer which could not respond to the student needs. Therefore, the researcher sought to find the

solution for the learning process to use as guidelines for improving practices. With this regard, assembled materials for the visual arts substance and other learning substances for Prathomsuksa 6 were built to enhance the development of skills and knowledge in the visual arts. It took into account the student satisfaction and needs; provided students with knowledge as well as practices. The assessment and evaluation methods were also improved to correspond to authentic situations. It intended to foster student habits of thinking, doing, solving problems, seeing learning values, being able in self-learning happily, and being able to apply knowledge in their daily lives. In the mean time, the focus was put on the visual arts to be conducive of learning improvement; be guidelines in the education management to achieve the curriculum objectives. Thus, it would lead to the quality development of the youngsters to be well rounded persons and have abilities, creativity, be good and ethical citizen, be able to live happily, and enhance the development of efficiency in education.

Purpose of the Study

To compare the learning achievement in visual arts substance of Prathomsuksa 6 students learning through assembled materials and traditional instruction.

Significance of the Study

The results of the study provide teachers and concerned parties in education with the development guidelines of the assembled materials for the visual art substance and other learning substances for Prathomsuksa students.

Research Scope

Research Population

The research population was Prathomsuksa 6 students at Ratanakosin IX School, Samut Prakan Education Office Area 2, the 1st semester, the Basic Education Curriculum B.E.2551 academic year; totally 4 classrooms, 160 students.

The classes were managed by mixing talented, moderate, and weak students. Two classrooms, 80 students, were assigned as the experiment group and the other 2 classrooms, 80 students, as the control group.

Duration of Study

The experiment was conducted in the 1st semester of the Basic Education Curriculum B.E.2551 academic year. Both groups were taught by the researcher one – hour session weekly, totally 10 hours, 10 weeks,

Content used in the Experiment

The content used in the experiment was Unit 1 drawing and painting for Prathomsuksa 6, consisted of 1. freehand drawing, 2. shape and form, 3. design, 4. drawing with various materials, 5. Thai identity drawing.

Term Definitions

1. Learning Achievement refers to learning and practical performance of visual arts as measured by the responses on the learning achievement test of visual arts substance unit 1, drawing and painting, for Prathomsuksa 6. The test, consisted of 30 – items, was created by the researcher.

2. Teaching with the use of visual arts substance assembled materials refers to teaching by having students study the material instructions and the learning substance in the assembled materials, self studying, group discussion of the learning substance, doing exercises on the knowledge aspect and visual arts practices, oral reporting on the practice results, conducting pre – and post – tests to evaluate the learning development. The students are informed of the learning achievement instantly by checking the test themselves. The student colleagues and the teacher participate in the exercise evaluation; the exercise key and marking criteria are provided at the end of the lesson. The students record their marks in the learning achievement summary. The teacher gives suggestions when the students ask

questions as well as stimulates the students to perform activities.

3. Traditional instruction refers to learning with teacher providing knowledge, using sample media to help students learn and understand the learning substances. The students practice visual arts activities assigned in the worksheets and report in front of the class. The teacher evaluates the work results. Pre - and post - tests are provided.

Research Hypothesis

The students taught using the assembled materials had higher learning achievement in visual arts substance than those taught by the traditional instruction.

Research Methodology

Building and Finding the Quality of the Research Instrument The building and finding the quality of the research instrument was implemented as follow.

1. Preparing a learning management plan as well as the assembled materials for the visual arts substance, drawing and painting for Prathomsuksa 6, Unit 1 as follows.

1.1 Studying the Basic Education Curriculum B.E.2544 of the Department of Curriculum and Instruction Development, the Ministry of Education to analyze the visual arts curriculum substances, class level 2, Prathomsuksa 6; studying the elaborated standards, disposition standards, and standard components.

1.2 Studying the school curriculum of Ratanakosin IX School, the visual arts substance, class level 2, Prathomsuksa 6; studying the learning management plan of the visual arts substance, Prathomsuksa 6, Unit 1 Drawing and Painting of the Department of Curriculum and Instruction Development, the Ministry of Education to analyze the learning substance, learning objectives, learning management process focusing on learner - centered, assessment and

evaluation process, learning sources, and teaching periods for building the assembled materials. The content was divided into: 1. freehand drawing, 2. shape and form, 3. light and shadow, 4. picture and background, 5. design.

Studying media production guidelines, good characteristics of learning media, production stages of instructional media, learning theory and related research. These were important in the applications of building better quality media.

1.3 Making 5 learning management plans of the visual arts substance Unit 1 Drawing and Painting, Prathomsuksa 6 to use in 10 - period instructions; 1 period per 1 hour, totally 10 hours.

1.4 Making 5 copies of the assembled materials, visual arts substance Unit 1 Drawing and Painting, Prathomsuksa 6 to use in the quality examination.

1.5 Asking 5 experts to consider the visual arts substance Unit 1 Drawing and Painting, Prathomsuksa 6 in terms of the structure, appropriateness and accuracy of the content as well as the format. Then the assembled materials were improved according to the experts' recommendations.

1.6 Taking the improved version of the assembled materials, visual arts substance Unit 1 Drawing and Painting, Prathomsuksa 6 to use in the experiment to find its efficiency.

2. Building and examination method of the quality of the learning achievement tests.

The tests on the visual arts substance Unit 1 Drawing and Painting, Prathomsuksa 6 were used to assess learning achievement of the learners who learned with the visual arts substance Unit 1 Drawing and Painting, Prathomsuksa 6. The steps in the implementation of the building and examination method were as follow.

2.1 Studying related literature concerning the test, assessment and evaluation, quality of achievement test, and building of

achievement test.

2.2 Building a test on the visual arts substance Unit 1 Drawing and Painting, Prathomsuksa 6, consisted of 50 items with 4 – choices, in accordance with the defined content and learning objectives.

2.3 Asking 5 experts to consider the test, and the choices of the 50 items, on visual arts substance Unit 1 Drawing and Painting, Prathomsuksa 6 in terms of the validity. Then the test was improved according to the experts' recommendations. The IOC of each item should be more than 0.5 which indicated that the item had the content validity.

2.4 Trying out the learning achievement test on the visual arts substance Unit 1 Drawing and Painting, Prathomsuksa 6 with 30 Prathomsuksa 6 students at Kehabangplee School, **Samutprakan** Educational Service Area Office 2. The difficulty index : p of the items was found 0.20 – 0.80; the discrimination index : r was -1 – + 1. The item, its answer choices, which was not qualified according to the criteria was improved and selected. Totally 30 items were selected for the test.

2.5 Trying out the learning achievement test on the visual arts substance Unit 1 Drawing and Painting, Prathomsuksa 6 which was improved from the 1st try – out with 30 Prathomsuksa 6 students at **Wat Sao Thong Klang** School, **Samutprakan** Educational Service Area Office 2. The analysis of the difficulty index : p of the items was found 0.43 – 0.70; the discrimination index : r was 0.22 – 0.92. The analysis of the reliability of the test was conducted by the **Kuder** – Richardson Formula 20 (**KR** – 20) yielded the reliability of 0.81.

2.6 The test was ready to use with the experiment group.

3. The Experimental Method

When the experiment group and the control group were readily assigned, the researcher conducted the experiment according to the following steps.

3.1 Conducting pre – test for both the experiment and the control groups using the learning achievement test on the visual arts substance Unit 1 Drawing and Painting, Prathomsuksa 6.

3.2 Teaching the experiment group using the assembled materials, visual arts substance Unit 1 Drawing and Painting, Prathomsuksa 6; teaching the control group by traditional instruction.

3.3 Conducting the test for both groups again using the same pre – test version when the experiment ended.

Data Analysis

1. The quality of the assembled materials, Prathomsuksa 6 was calculated with Item – Objective Congruency Index – IOC.

2. The comparison of learning achievement of the students learned with the assembled materials of the visual arts substance, Unit 1 Drawing and Painting Prathomsuksa 6 was conducted by independent sample t – test.

3. The efficiency of the assembled materials, Prathomsuksa 6 was calculated with $E1 / E2$

4. The comparisons of learning achievement of Unit 1 Drawing and Painting of Prathomsuksa 6 students, as measured by the post – tests, between the experiment group and the control group by means and independent sample t – test.

Samples of Student Tasks
Topic: Freehand Drawing

Experiment Group Control Group



Illustration 3 of Student 3



Illustration 4 of Student 3

Topic: Shape and Form

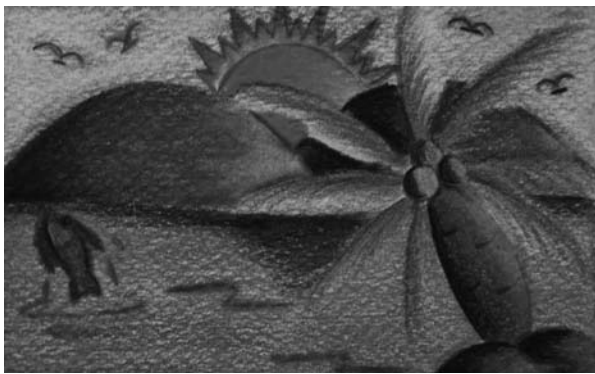


Illustration 13 of Student 21



Illustration 12 of Student 19

