Enhancement of Study Skills for the Subject Career 3 (3D Drawing) for Mathayomsuksa 2 Students using the Canva Application

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Abstract

The objectives of this research were (1) to enhance study skills for the subject career 3 (3D Drawing) for Mathayomsuksa 2 students, (2) to develop teaching materials using the Canva application, and (3) to study the satisfaction of students in studying the subject career 3 (3D Drawing). The samples used in the research were grade 2/10 students, semester 1, academic year 2022, Sanpatong Wittayakhom School, Sanpatong District, Chiang Mai Province, total 36 people. Research tools included the Canva application, skill building guides, video clips of 3D drawing using the Canva application, and lesson plans. However, data analysis uses statistics of percentage, mean and standard deviation. The results of the study found that the enhancement of learning skills was at a high level = 4.43, the development of instructional materials using Canvas Image application was at a high level = 4.48, and overall student satisfaction was at a high level = 4.47. While educating students utilizing innovative teaching medium and analyzing student behavior in class, it was discovered that students paid attention and participated in class activities quite well.

Keywords: Canva application, 3D drawing, Enhancing study skills

Introduction

The core curriculum is the curriculum that the commission for basic education determines will be used in the development of all students at the level of basic education. The core curriculum is made up of important components like learning standards and indicators, core learning subject matter, and a basic learning time structure that outlines how each class period will be structured. The main requirements for passing the course, learning subject groupings, and learner development activities. The occupational learning topic area is a subject area that aids in the development of learners' knowledge, comprehension, and fundamental life skills as well as their awareness of changes and ability to creatively apply information. (Department of Academic Affairs, 2008)

3D modeling is a technique for creating items that can be viewed from all directions, including front, top, and oblique, with various resolutions based on the intended use of the workpiece. Many details could be present, for instance, if it is a 3D representation of a structure. It may contain information on the exterior of the thing if it's a product rather than within, and vice versa. Making 3D drawings is now widely used in every industry because to the rising efficiency of computer hardware, its low cost, and the availability of several 3D drawing applications. (Chiraphan, 2013) To generate items or work with high resolution, including scale that satisfies requirements, it takes an expert in design regardless of whether it's for the purpose of product design, advertising, or the film business. However, how each program operates will vary. For example, some programs pay close attention to the details necessary to accurately simulate the movement of real objects using real physics; others are suited for using to create a variety of effects for presentations; still others have more support tools than others etc. Hence, 3D drawing may be completed using a number of programs that are now on the market, with the benefit of cheap production costs, current technology that is suited for 3D drawing, can be utilized in a variety of applications, and can also be created from scratch.

Drawing is the method of expressing a designer's thoughts on paper in a systematic way. It is used in handicraft or industry as writing to depict pictures, forms, and other aspects of a design so that it may be produced as a physical object. (Chaiyarat, 2010) The drawings must be in a universal language with signs or symbols, and the formats must be simple enough for someone who has not studied drafts to understand. This will save money and get quality work that meets the requirements. The written form will be a medium to communicate the ideas or needs of the designer to others and can be used to create correctly. reasonable. (Suetrong, 2010)

Users can design using "Canva", a ready-made software in the form of a website, users do not need to have a background in art to use Canva, which offers a mobile application version that is simple and convenient for users to use in addition to developing websites. Canva offers a variety of tasks, including presentations, and can help every task very well, especially in times of urgency because there are many formats to choose from. (Diggelen, 2021). Canva is a platform for graphic design that may be used to create content for social media, presentations, print, and animation. The benefit of using the Canva app is that you can rapidly produce lovely photos or movies since there are so many templates to pick from that you can get started right away even without a graphics or video background. The program is available in both free and premium editions. Canva offers the benefit and strength of offering more than 60,000 templates, making it easier to create professional-quality designs for a variety of purposes, including social media posts, infographics, resumes, presentations, logos, and more. If someone is seeking for a free video creator, Canva is an intriguing option because it is free to use and supports Thai languages.
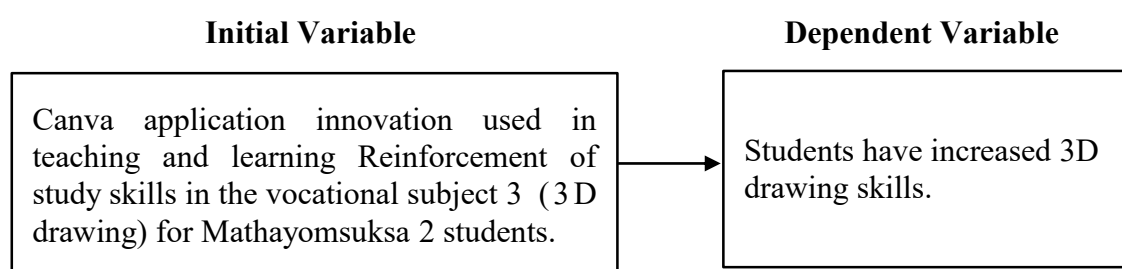
The core curriculum has set the content and learning standards for Mathayomsuksa 2 students, creating objects or methods according to technological processes safely designed by conveying ideas in 3D sketches or projections, to contribute to the prototyping of objects or to convey the idea of how to model ideas and report results, to present methods for studying 3 professional academic subjects on 3D drawing. The issue is that because most students have never used it and have use restrictions, they lack fundamental drawing abilities and cannot master 3D drawing in the allowed period. The researcher has a suggestion that using the Canva application can be used to develop 3D drawing materials for Mathayomsuksa 2 students, to give students drafting skills and satisfaction in learning about 3 careers in 3D drawing, as well as the development of teaching materials that are interesting and can be applied in the future.

Research Objectives

1. To enhance study skills for the subject career 3 (3D Drawing) for Mathayomsuksa 2 students.
2. To develop teaching materials using the Canva application.
3. To study the satisfaction of students in studying the subject career 3 (3D Drawing).

Conceptual Framework

Using the Canva application, the researcher focuses on the study as Figure 1 in this study on the improvement of vocational topic study skills 3 (3D drawing) for Mathayomsuksa 2 students.

Initial Variable	Dependent Variable
Canva application innovation used in teaching and learning Reinforcement of study skills in the vocational subject 3 (3D drawing) for Mathayomsuksa 2 students.	Students have increased 3D drawing skills.

Figure 2 Conceptual Framework
(Source : Researcher, 2023)

Methodology

1. Population determination and sample selection

1.1 Population determination

Population and sample, the population used in this research were Mathayomsuksa 2 students of Sanpatongwittayakom School, 5 rooms, totaling 188 people, semester 1, academic year 2022.

1.2 Sample selection

The sample used in this research were 36 students in Mathayomsuksa 2/10, first semester, academic year 2022, at Sanpatong Wittayakhom School, which was drawn by purposive random sampling. Purposive sampling on the other hand, refers to the selection of a sample group that most closely matches the researcher's criteria or objectives.

2. Canva application study

"Canva" is an application for creating various presentation materials such as presentation, poster, card, resume, certificate, infographic etc., Canva comes in standard sizes or user-defined sizes.

2.1 Using the Canva Application: users can access it in two ways: (1) through the Canva app and (2) through the website www.canva.com.

2.2 Use through the website: sign up users can sign up with their Facebook account, Google mail (G-mail) or any other email address. First page when logged in to the CANVA website page as follows; it is user design management, grouping and deleted media, the creation of each design has a predetermined size, but the user can customize the size as well, it's all designs that have already been made.

2.3 How to create a design.

2.4 Operation management menu.

2.5 Menu in the upper right corner that needs to be designed.

2.6 Creation of research tools (manuals), links and QR codes, research manuals, as illustrated in Figure 2 below.

Figure 2 The cover of the research handbook and the process of creating research tools
(Source : Researcher, 2023)

3. Tool Trial

Population groups have difficulties and barriers in their work, certain population groups are unable to adopt the researcher's methods, problems and skepticism arise in the work, and the researcher is unable to offer all populations thorough assistance.

3.1 Tool Modifications: the researcher has prepared a video clip of the operational process as follows; (1) procedures for creating tools for drawing work using the Canva application, (2) example of isometric drawing using the Canva application, and (3) examples of obvious writing using the Canva application, by creating a YouTube link: https://youtu.be/2mf1yanfLY4, as illustrated in Figure 3 below.

Figure 3 3D drawing video clip using Canva application
(Source : Researcher, 2023)

3.2 Applying to the sample: The researcher had the sample group perform the activities in accordance with the video clip they had been watching when it was time to study, and the researcher always provides assistance to the sample group when they are having difficulties carrying out their jobs appropriately. The sample group had been given a 3D sketching video clip created using the Canva software to watch before class, thanks to the researcher.

4. Tools used to collect data

The questionnaires were the instrument used for data collection, and the researcher produced them based on the conceptual framework derived from the idea, theory, and related study; the questionnaire was composed of three sections;

Section 1: general information questions.

Section 2: there were three parts to the question the learning management process, media innovation, and assessment and evaluation and a total of nine questions. Students were asked to rate their satisfaction on a 5-point scale with regard to their learning about jobs in three-dimensional (3D) drawing.

Section 3: open-ended questions enabling students to offer further thoughts regarding issues and recommendations they have encountered while learning vocational science 3 (3D Drawing).

The completed questionnaire was then handed to the mentor, who reviewed it to make sure it covered the study goals. Three mentors and experts then received amended questionnaires, which were then checked for content validity and linguistic accuracy as follows: (1) head of occupational affairs group, totaling 1 people, and (2) teachers in the vocational subject group, totaling 2 people. At the end of the questionnaire, the answers from the mentor and the experts were used to determine the IOC. It was found that all questions exceeded 0.6, Nonetheless, the mentor and the subject matter specialists advised changing the questionnaire's language structure. For instance, measurement and assessment inquiries should be updated to include new questions since queries or optimized statements are more understandable. Then use advice from teachers and industry professionals to properly develop it before putting it to the test (Try Out). Fifteen students who were not part of the sample were used to test the redesigned questionnaire in order to determine its reliability using the Cronbach's alpha coefficient. It was discovered that the content validity questions had an IOC

value of 1.00 for the connection between the questions and the objectives. (Srisaard, 2010) Then, continue copying the questionnaire to use for actual data collection.

5. Data collection

In this study, the researcher collected information from students taking vocational subject 3 (3D drawing) in order to perform a study of student satisfaction; (1) the researcher has asked for cooperation in answering the questionnaire for 36 students studying occupational subjects 3 (3D drawing) on September 20, 2022, (2) take the questionnaire to verify its completeness, (3) the data obtained from the questionnaire responses of the sample were analyzed using a packaged program, and (4) qualitative data verify the integrity of the data.
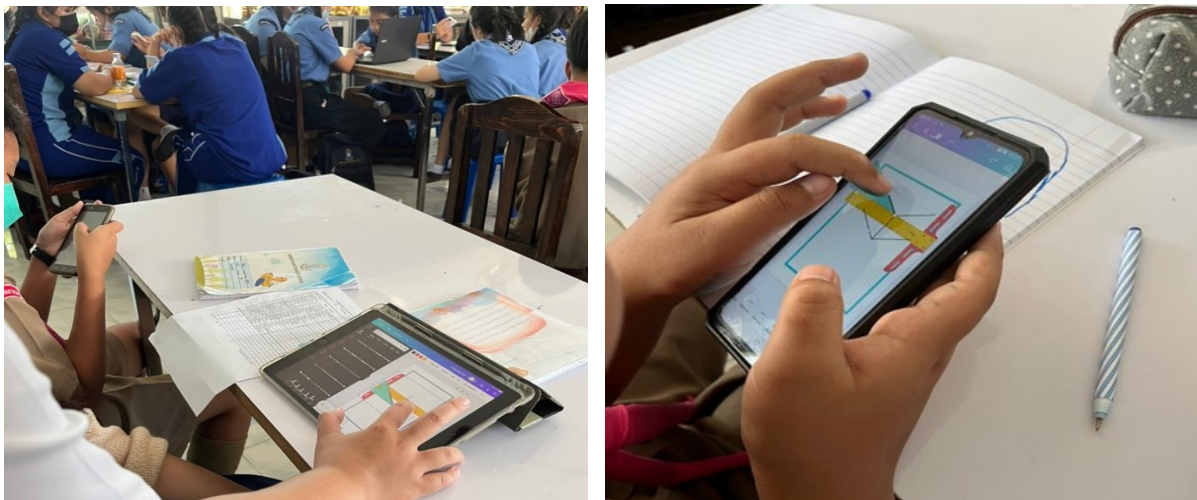
6. Data analysis

Analysis of the satisfaction of the sample as follows; (1) calculate the satisfaction response score from a questionnaire with a 5-level estimate scale to obtain data, (2) to determine the percentage, mean, and standard deviation from the survey data, a packaged application was used for analysis, (3) to understand the mean satisfaction, use the findings from the data analysis, and (4) the tabular findings of the data analysis are shown and discussed.

7. Statistics used in data analysis

7.1 Statistics used to determine tool quality use the following statistics; (1) Finding the validity of a questionnaire using the IOC consistency index formula, and (2) analysis for discriminant power using Pearson's simple correlation between Item-total correlation. (Tairuakham, 2009)

7.2 The statistics used for data analysis are; Percentage, Arithmetic Mean, and standard deviation. (Srisaard, 2010)

Figure 4 Represents the steps in the trial
(Source : Researcher, 2023)

Results

The findings of a questionnaire used to gather feedback from students in a particular sample group to determine how satisfied students were with their experience learning the vocational topic 3 (3D drawing) are as follows;

1. Respondents' basic demographic data: from the satisfaction questionnaire distributed on September 20, 2022, a total of 36, 33 questionnaires were returned, accounting for 97.7 percent, from those 33 satisfaction questionnaires, the respondents were as follows;

1.1 Gender; as stated in Table 1, there were 36 responses to the satisfaction survey, with 9 men (or 27.3%) and 24 women (or 72.7%).

Table 1 Shows percentage of gender of respondents

Gender	Quantity	Percentage
Male	9	27.30
Female	24	72.70
Total	**33**	**100**

1.2 Age; from the satisfaction survey respondents of 33 people, it was found that they were in the age range of 12-14 years old, the most number of 33 people, representing 100%, details as shown in Table 2.

Table 2 Percentage of respondents' age range

Age	Quantity	Percentage
Under 11 years old	-	-
12-14 years	33	100
15 years or more	-	-
Total	**33**	**100**

2. Displays information on student satisfaction assessment items in learning about careers 3 (3D drawing); from the results of the satisfaction assessment of the sample of students in learning occupation 3 (3D drawing), in summary, the overall picture of the questionnaire found that they were satisfied at a high level ($\bar{x}$= 4.47) or accounted for 89.4 percent as shown in Table 3.

Table 3: Shows the student's satisfaction in studying the occupational subject 3 (3D drawing)

Assessment Items	Level of Satisfaction					Average $\bar{x}$	S. D.	Level
	5 (the most) percentage	4 (a lot) percentage	3 (moderate) percentage	2 (little) percentage	1 (least) percentage			
1. Learning Management Process								
1.1 The content is appropriate	14 person 42.43	16 person 48.48	3 person 9.09	-	-	4.33	0.65	a lot
1.2 Learning management activities are appropriate	19 person 57.58	10 person 30.30	4 person 12.12	-	-	4.45	0.71	a lot
1.3 Teachers can manage learning appropriately	20 person 60.61	10 person 30.30	3 person 9.09	-	-	4.52	0.67	the most
average	53.54	35.69	10.1			4.43	0.67	a lot
2. Media and Innovation								
2.1 Availability of student learning materials (telephone, internet)	15 person 45.46	13 person 39.39	5 person 15.15	-	-	4.30	0.73	a lot
2.2 The media and innovations used are modern, accessible and easy to use	23 person 69.70	7 person 21.21	3 person 9.09	-	-	4.61	0.66	the most
2.3 The media and innovation used are suitable for learning	20 person 60.61	10 person 30.30	3 person 9.09	-	-	4.52	0.67	the most
average	58.59	30.3	11.11			4.48	0.70	a lot
3. Measurement and Evaluation								
3.1 Assessment methods are consistent with the objectives and teaching activities.	18 person 54.55	11 person 33.33	4 person 12.12	-	-	4.42	0.71	a lot
3.2 Measurement and evaluation are in accordance with established regulations, rules and agreements	21 person 63.64	8 person 24.24	4 person 12.12	-	-	4.52	0.71	the most
3.3 Measurement and evaluation are efficient and fair	22 person 66.67	8 person 24.24	3 person 9.09	-	-	4.58	0.66	the most
average	61.62	27.27	11.11			4.51	0.69	the most
Total Average	**57.92**	**31.31**	**10.77**	**-**	**-**	**4.47**	**0.68**	**a lot**

From Table 3: The respondents were satisfied with learning about the occupational subject 3 (3D drawing), it was found that they were satisfied at a high level ($\bar{x}$ = 4.47, S.D.= 0.68), it lists each side in order from greatest to least. As follows No. 1 in measurement and evaluation ($\bar{x}$ = 4.51, S.D.= 0.69), No. 2 in media and innovation ($\bar{x}$ = 4.48, S.D.= 0.70), and No. 3 in learning process ($\bar{x}$ = 4.43, S.D.= 0.67) respectively.

Discussions

From the satisfaction survey respondents of 33 people, it was found that they were in the age range of 12-14 years old, the greatest number of 33 people, representing 100 percent, and displays information on student satisfaction assessment items in learning about careers 3 (3D drawing); from the results of the satisfaction assessment of the sample of students in learning occupation 3 (3D drawing), in summary, the overall picture of the questionnaire found that they were satisfied at a high level ($\bar{x}$ = 4.47) or accounted for 89.4 percent.

In class research reinforcing study skills in occupational studies 3 (3D Drawing), for Mathayomsuksa 2 students, using the Canva application, the results of data analysis can be discussed as follows; the satisfaction assessment results after the vocational coursework 3 (3D drawing) for Matthayomsuksa 2 students, using the Canva application, found that students were overall satisfied with their studies at a high level ($\bar{x}$ = 4.47, S.D.= 0.68) which is in accordance with the predetermined assumptions, and when considered as an evaluation item, it was found that students were satisfied with the first order, No. 1 in measurement and evaluation ($\bar{x}$ = 4.51, S.D.= 0.69), No. 2 media innovation ($\bar{x}$ = 4.48, S.D.= 0.70), and the No. 3 in learning management process ($\bar{x}$ = 4.43, S.D.= 0.67) respectively, thus making students satisfied. The findings are consistent with the research of Chanput (2018) which researched "the effects of blended training via using cloud computing to students' infographic design ability faculty of education, Sikpakorn University", by the purpose of this research were to (1) a comparison of the effectiveness of training combined with the use of cloud computing students in the faculty of education, before and after training, (2) the ability to design infographic students in the faculty of Education, and (3) the study the opinions of the trainees, training on the use of technology combined with cloud computing. The ability to design infographic. The sample used in this study include undergraduate students in the Faculty of Education, Sikpakorn University first-year academic year 2017 the students 20 people the method of selecting volunteers. The instrument used in this study (1) structured interviews, (2) the planning of training activities combined with the use of cloud computing, the ability to design infographic, (3) achievement test training design infographic, (4) assessments design infographic, and (5) survey training, training on the use of technology combined with cloud computing, the statistics used to analyze data were mean ($\bar{x}$), standard deviation (S.D.) and statistical t-test (Dependent). The results have found that (1) the results of the comparative effectiveness of training, combined with the use of cloud computing, the ability to design an infographic of students, Faculty of Education, Silpakorn University higher learning the statistical significance level 05., (2) the ability to design infographic, after training combined with the technology of cloud computing students Faculty of Education, Silpakorn University in very good the average ($\bar{x}$ = 16.30, S.D. = 0.13) 3) a review of the student, training on the use of technology combined with cloud computing, the ability to design infographic, student opinion was good, the average ($\bar{x}$ = 4.35, S.D. = 0.47).

This is in line with the research results of Bamrungjit (2013) on the development of e-learning system lesson materials for the subject of handicraft and craft 1 (drawing 1) Matthayomsuksa 1. The results showed that (1) the e-learning system lesson media for the subject of mechanic and craft 1 (drawing work 1) Matthayomsuksa 1, the efficiency was

81.75/81.25, (2) the mean score of learning achievement after learning was significantly higher than before learning at the .05 level, and (3) the students' satisfaction with the e-learning system was at a high level. Moreover, it is consistent with Boonsue (2018) study on the Office of Educational Service Area's elementary English teachers' understanding of TPACK the integration of technology with teaching techniques and content and the variables influencing that knowledge Primary Education in Chiang Mai, Region 1. The researcher provides students with access to the Canva application so they may choose a template to use while creating a piece of work (resume). The results of integrating research into teaching and learning revealed that students were more interested in the subject matter, more confident, and more skilled in using technology and language abilities necessary for success in the twenty-first century. Also, by incorporating research results into teaching and learning, it is possible to link data on the importance of technical proficiency, successful teaching techniques, and curriculum, as well as the integration of teachers' experience in each field.

Conclusion and suggestions

From the above findings it can be concluded that; (1) to enhance the study skills of vocational subjects 3 (3D drawing) for Mathayomsuksa 2 students, the overall picture was at a high level ($\bar{x}$ = 4.43, S.D.= 0.67), (2) to develop teaching materials using the Canva application, the overall level is high ($\bar{x}$ = 4.48, S.D.= 0.70), and (3) to study the students' satisfaction in studying the course occupational career 3 (3D Drawing), the overall level was at a high level ($\bar{x}$ = 4.47, S.D.= 0.68). There are also suggestions for conducting research, namely; (1) suggestions for applying the research results are; the Canva application can be applied in the process of teaching content or activities in other subjects, and (2) suggestions for further research are; the Canva application can be applied to teaching and learning in other areas by applying drawings such as architectural and engineering drawings.

However, in future studies, the researcher may provide questions or administer tests both before (using an application) and after (increasing study abilities), since doing so would improve research comprehension, this will allow the researcher to assess the effectiveness of skill improvement in this study.

New knowledge and the effects on society and communities

A time when there is so much information that there isn't enough time to process it all has led to the preference of many companies for adopting digital media for information exchange and public relations; it is a successful medium for communication between professors and students. An infographic (or information graphic) is a visual representation of a lot of information and knowledge that accurately and clearly identifies facts, statistics, knowledge, and numbers as well as provides significant information in a condensed form that is organized into categories. Information consumption is thus facilitated and accelerated by infographic media. In addition, infographics are used by scientists, computer programmers, mathematicians, statisticians, public relations professionals, and educators as tools to facilitate the creation and dissemination of conceptual information, support human self-learning, and stimulate learning, which is an important aspect of education in the modern world.

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