International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (6), November-December 2023, pages 275-280. Old ISSN 2774-0366: New ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3476

Effect of Learning Management Using Project-Based Learning on Graphic Design Ability of Sophomore Students at Suzhou Institute of Art and Design, the People's Republic of China

Liu Jie[1], Thapana Choicharoen[2], and Suwana Juithong[3]
[1] Master student, Curriculum and Instruction Program, Valaya Alongkron Rajabhat University under the Royal Patronage Pathum Thani Province, Thailand
[2,3] Lecturer, Curriculum and Instruction Program, Valaya Alongkron Rajabhat University under the Royal Patronage Pathum Thani Province, Thailand
E-mail: ljie75250@gmail.com, ORCID ID: https://orcid.org/0009-0004-0581-6444
E-mail: thapana@vru.ac.th, ORCID ID: https://orcid.org/0009-0001-7504-138X
E-mail: suwana@vru.ac.th, ORCID ID: https://orcid.org/0009-0002-1391-5819
Received 30/08/2023 Revised 06/09/2023 Accepted 19/09/2023

Abstract

Background and Aim: The twenty-first Century is the digital era, with the rapid development of science and technology. Schools and all levels of educational institutes, as places that educate theoretical knowledge to students and develop their practical ability revising the plan and supplementing the teaching materials include developing teaching and learning strategies to promote student abilities and 21st-century skills. The current situation in many art and design institutes are quality of learning and teaching especially strategies to improve the design ability of students according to the trend of graphic design at the global level. Graphic design ability is one of the major abilities of a student who studies in the field of fine and applied art previous educators researched and reported that Learning Management Using Project-Based Learning (PBL) combines curriculum with practice to improve students' initiative, stimulate students' flexible use of knowledge to solve practical problems, and can support the student to develop ability skill and competency. This research aim is composed of 1) to study students' Graphic Design Ability after Learning Management Using project-based learning (PBL) and 2) To assess Students' Satisfaction with Learning Management Using project-based learning (PBL).

Materials and Methods: Instruments were (1) an Instrument for the experiment a Lesson plan: 5 lesson plans each lesson plan for 3 hours, 15 hours in total, (2) an Instrument for collecting data composed of: 1) Graphic design ability evaluation form 2) Student satisfaction questionnaire. Methods were (1) The samples were Learned toward learning management using project-based learning. (2) After the samples learned about learning management using project-based learning. The samples were evaluated for Graphic Design Ability by evaluation and student satisfaction through a satisfaction questionnaire.

Results: Found that: (1) After learning management using project-based learning, students' Graphic Design Ability was which was statistically higher than the determined criterion set 70%. (2) After learning management using project-based learning students' satisfaction with Learning Management Using project-based learning was high level.

Conclusion: After learning management using project-based learning, students' Graphic Design Ability of student statistically higher than the determined criterion set of 70%. and students' satisfaction with learning management using project-based learning was high level.

Keywords: Learning Management Using Project-Based Learning; Graphic Design Ability; Student Satisfaction

Introduction

In December 2016, General Secretary Xi Jinping pointed out at the national conference on ideological and political work in colleges and universities that "what kind of people colleges and universities cultivate, how to cultivate people, and for whom to cultivate people" is a "fundamental question". The digital era is a magical era, which subverts the reality of many things in the tradition of the characteristics of the visual language of graphic design this era has likewise undergone a radical change. The progress of society in the digital age is not a static demand for design talents, With the rapid development of the economy, with the times, the application field of art and design professionals in all directions are

Citation
Liu, J., Choicharoen, T., & Juithong, S. (2023). Effect of Learning Management Using Project-Based Learning on Graphic Design Ability of Sophomore Students at Suzhou Institute of Art and Design, the People's Republic of China. International Journal of Sociologies and Anthropologies Science Reviews, 3 (6), 275-280; DOI: https://doi.org/10.60027/ijsasr.2023.3476

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (6), November-December 2023, pages 275-280. Old ISSN 2774-0366: New ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3476

constantly updated. For example, with the development of mobile phones, computers, and the Internet, the emergence of new forms of design applications such as H5 micro-scenes and mobile phone UI interactions means that art design has a new field of application (Wang 2017).

1. The graphic design teaching content is old, monotonous, and disconnected from practice. In the teaching process, teachers only set teaching objectives from textbooks, lack targeted career orientation, are disconnected from life and social development, slow content update, can not reflect the development of society promptly, students are not clear what the graphic design course is, even if learned cannot solve the actual work and life problems (Zhao,2016).

2. Teachers use the same teaching content for all students, lack of relevance. Textbook-based, lack of explanation and analysis of actual work projects, ignoring the fact that the graphic design course is a course that integrates content, ability, and computer ability, and focuses on practice as well as innovation. Simple textbook content is not enough to complete a more comprehensive task, and cannot reflect the students' personality, which is not conducive to student innovation (Wang, Z.Y. 2016).

3. The choice of traditional graphic design teaching methods is passive and blind. In the graphic design course teaching, teachers use traditional graphic design teaching methods, still mainly language lectures, Teachers are in a dominant position, and students are in a passive acceptance, resulting in low interest in learning, poor innovation, and only breakthroughs to promote students' understanding of knowledge and mastery of ability. (2014 https://www.xzbu.com/1/view-11279748.htm)

The old-fashioned stereotypical lectures can no longer meet the current development of information and the requirements of enterprises. The development of society requires us to use new educational methods to meet the requirements of students, schools, and enterprises.

The old-fashioned stereotypical lectures can no longer meet the current development of information and the requirements of enterprises. The development of society requires us to use new educational methods to meet the requirements of students, schools, and enterprises.

Research Objectives

1. To compare the Graphic Design Ability of sophomore students after learning toward learning management using project-based learning with the criterion set 70%.

2. To assess Students' Satisfaction with learning management using project-based learning (PBL).

Literature Review

In this research review literature, the researcher studied the main aspects of observing students' self- learning skills, students' ability to express themselves, and teamwork through Learning Management Using project-based learning (PBL)

Dependent Variable 1：Graphic Design Ability

Definition： Graphic design is the integrated use of graphics, color, and text, which is an important form of visual expression, creating a unique form of space, while expressing the theme, bringing a different visual impact and charm. Among them, the text must exist in the design, it can visually express the main idea of the design, and the use of graphics and color can bring the maximum degree of visual impact to consumers. (Yuan 2017)

Principle： Graphic design can realize the creativity of the design theme, which has the effect of attracting attention, spreading information, and persuading the object, quickly attracting the senses. It is closely related to the physiological and psychological reactions of the public. It consists of 3 parts:1) graphics, 2) color, and 3) text, Through the combination can vividly express the theme and creativity.

1. The use of color is a complex discipline, an important part of graphic design, and the most basic visual language requirement. In terms of impact and liveliness, it has the incomparable advantage of all other visual factors. Color can influence human emotions and produce a strong visual impact.

2. The use of graphic elements, composed of A) Regular and irregular graphic elements. B) Symbolic graphic elements. C) Variant graphic elements.

3. The use of textual elements. composed of A) Readability of the text.
B) Position of the text. C) Text font, and size.

Dependent Variable 2： Student satisfaction

Definition： Satisfaction theory was developed by Richard N. Cardozo in 1965, who suggested that there would be some influence of satisfaction in behavior and choice. Satisfaction is an indicator of satisfaction with the quality of service through specific statistics. (Chao, 2007) In higher education, the school provides educational services to the students, and the students are the recipients of the educational services provided by the school Principle： A subjective affective response to the

Citation
Liu, J., Choicharoen, T., & Juithong, S. (2023). Effect of Learning Management Using Project-Based Learning on Graphic Design Ability of Sophomore Students at Suzhou Institute of Art and Design, the People's Republic of China. International Journal of Sociologies and Anthropologies Science Reviews, 3 (6), 275-280; DOI: https://doi.org/10.60027/ijsasr.2023.3476

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (6), November-December 2023, pages 275-280. Old ISSN 2774-0366: New ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3476

perceived actual quality of a course compared to one's desired quality of learning, which is a measure of the extent to which the learner achieves the desired goal and enjoys the learning process(Dai, 2017)

Independent Variable 1： Learning Management Using project-based learning (PBL).

Definition： Learning Management Using project-based learning is a student-centered pedagogy that involves a dynamic classroom approach in which students are believed to gain deeper knowledge through active exploration of real-world challenges and problems. (Edutopia, 2016), pbl contrasts with paper-based, rote, or teacher-directed instruction that presents facts or charts a smooth path to knowledge by asking questions, problems, or scenarios.(Vogler, et al. 2018).

Principle： Learning Management Using project-based learning is a new pedagogy that is fundamentally different from the traditional teaching-learning approach, as reflected in the conceptual definition of Learning Management Using project-based learning. However, compared with other new teaching methods, Learning Management Using project-based learning has also developed and innovated the concept of teaching and learning to a certain extent. To further understand Learning Management Using project-based learning, it is necessary to dig deeper into the basic concept of project-based teaching.

Component/Feature/Step of teaching：

1. Determine the theme of the project

This stage is the beginning of the implementation of Learning Management Using project-based learning. Teachers introduce the project so that students can understand the significance and scope of operation of the project. The selection of the project has four points: 1) students' interest in learning. 2) Project and market fit. 3) The project has a certain degree of difficulty so that students can better use knowledge to solve problems. 4) The selection of projects should cover a wide range of areas, and the knowledge points used should be related to each other.

2. Develop a project plan

Under the guidance and help of teachers, students will form different creative themes for teaching projects, and the best project theme will be determined after discussion by each project group. The project plan formulated by each project team under the guidance of the teacher is the action program for the implementation of the project in the whole teaching activities, which mainly includes the project theme, work tasks, team members and division of labor, time arrangement, working methods, working procedures, etc.

3. Implementation of the project plan

Members of each project team define their work tasks and responsibilities according to the project plan and carry out a series of practical activities such as market or customer demand survey, data collection, data sorting and analysis, production, and product display within the specified time range. They are also supervised and guided by the project leader, teachers, technicians, experts, and scholars to promote the implementation and modification of the project plan. Teachers guide students to actively participate in group discussions, encourage innovation, understanding, inspection, supervision, and guidance of students to operate the process, grasp the process, and give full play to the role of facilitator and mentor.

4. Evaluation and Reflection

After the completion of the project, each team member will first make a self-evaluation of their work, and then the teacher will evaluate each team from the aspects of time control, technical operation, product quality, division of labor, and learning atmosphere, and guide the students to discuss and think about the successes and shortcomings in the work process, and summarize the difficulties. The teacher can show different solutions to the students. So that students can have a more comprehensive understanding of the key points of the project, and when they encounter similar problems in the future, they can use what they have learned to solve them more quickly. Based on the above theory, learning management using project-based learning has the following characteristics.

Research conceptual framework

The concept of this research is composed of 3 variables one independent variable is learning management using project-based learning and the dependent variable is graphic design ability and students' satisfaction with Learning Management Using project-based learning.

Citation
Liu, J., Choicharoen, T., & Juithong, S. (2023). Effect of Learning Management Using Project-Based Learning on Graphic Design Ability of Sophomore Students at Suzhou Institute of Art and Design, the People's Republic of China. International Journal of Sociologies and Anthropologies Science Reviews, 3 (6), 275-280; DOI: https://doi.org/10.60027/ijsasr.2023.3476

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (6), November-December 2023, pages 275-280. Old ISSN 2774-0366: New ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3476

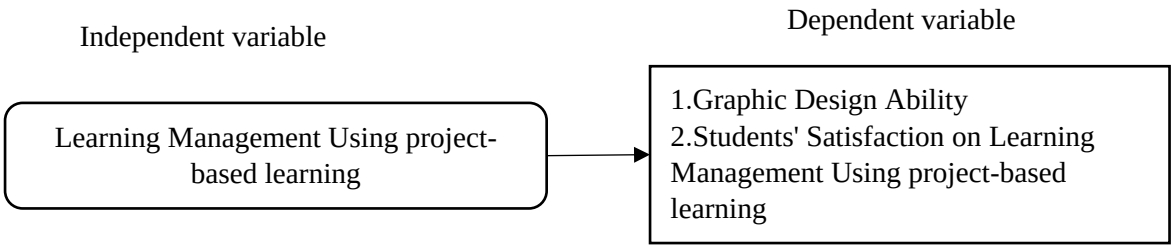

Figure1 Independent variable and dependent variable

Methodology

1. The population of this study is Suzhou Institute of Art and Design (6 classes, 25 per class) Sophomore Students 2023 students of the Faculty of Environmental Arts; The sample of this study was 25 (1 class) students derived from cluster random sampling method.

2. Research instruments were composed of 2 instruments composed of 1) Graphic design ability evaluation form. 2) Student satisfaction questionnaire on learning management using Learning Management Using project-based learning Construction and examining/assessing the quality of research instruments. The research instruments were evaluated by five experts, including two curriculum area experts, two content-specific teaching experts, and one measurement and evaluation expert. After the experts evaluated the research instruments, the researcher implemented the instructional strategy (Learning Management Using project-based learning) and followed the lesson plans. After the implementation, the researcher employed 1) a Graphic Design Ability evaluation form (Rubric score) and 2) a Questionnaire for students' satisfaction with learning management using project-based learning. Construction and examining/assessing the quality of research instruments including the achievement test, the evaluation form, and the students' satisfaction questionnaire for collecting data to assess the learning outcomes.

3. Data collection, the procedure for data collection was as follows; (1) The sample was taught Learning Management Using Project-Based Learning. (2) After the instruction, the sample was evaluated using Graphic Design Ability evaluation and Student satisfaction with learning management using Learning Management Using project-based learning.

4. Data analysis. In this study, we used statistical procedures to analyze the data according to the study objectives, the details are as follows; (1) To compare the graphic design ability of sophomore students after receiving Learning Management Using Project-based Learning by using a t-test for one sample, (2) To assess Student satisfaction on learning management using project-based learning by using t-test for one sample.

Results

The research findings based on the two objectives were summarized as follows;

The result of comparing graphic design ability with the determined criterion at 70% is shown in Table 1

Table 1: The result of comparing the mean score of Learning Management Using project-based learning. after learning through learning management using Graphic Design Ability with the determined criterion of 70 percent by using a t-test for one sample

Group	N	Full score	Criterion score	*M*	*SD*	t	*p*
Experimental group	25	100	70	82.24	7.82	7.81*	0.00

*P<.05

As presented in Table 1: the mean score of graphic design ability was 82.24 and the standard deviation was 7.82 which was statistically higher than the criterion of 70% (Full score is 100, criterion score is 100).

The result of assessing the students' satisfaction with learning Management Using project-based learning is as follows:

Citation
Liu, J., Choicharoen, T., & Juithong, S. (2023). Effect of Learning Management Using Project-Based Learning on Graphic Design Ability of Sophomore Students at Suzhou Institute of Art and Design, the People's Republic of China. International Journal of Sociologies and Anthropologies Science Reviews, 3 (6), 275-280; DOI: https://doi.org/10.60027/ijsasr.2023.3476

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (6), November-December 2023, pages 275-280. Old ISSN 2774-0366: New ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3476

Table 2: The result of assessing the mean score of Learning Management Using project-based learning (PBL) using Satisfaction with lesson plan

Group	N	Full score	Criterion score	*M*	*SD*	*p*
Experimental group	25	5.00	3.50	4.25	0.80	0.00

*P<.05

As presented in Table 2: the mean score of students' satisfaction with Learning Management Using project-based learning method was 4.25 (Full score5.00, *SD* 0.80).

Discussion

According to the research results, after using Learning Management Using project-based learning management, students' graphic design abilities are above the norm and students are satisfied with this learning method

1. Determine the theme of the project: Learning management adopts Learning Management Using project-based learning, using real projects instead of empty lesson plans and rote memorization to keep up with social development, stimulate students' interest and ability of self-study, improve students' learning efficiency, adopt effective and reasonable teaching project design, and combine theoretical knowledge with practical skills and knowledge. Effectively solve the problem of linking theoretical knowledge and practical skills in teaching. (Wang Zhe, 2012) At school, interest is an important aspect of an individual's connection to a domain being learned. Interest can be personal, as is the case when a student voluntarily gravitates to the domain, or it can be triggered. Incongruous, surprising, intensive, or personally relevant features can spark interest, while participatory activities, such as PBL, can maintain that triggered situational interest (Hidi & Renninger, 2006 Schneider et. Al, 2016)

2. Develop project plan: Learning management adopts Learning Management Using project-based learning, changes the rigid teacher-student teaching relationship, takes students as the main body, enlivens the classroom atmosphere, and promotes the understanding of new knowledge. It has greatly aroused the enthusiasm of students to study actively and improved the style of study to a certain extent. (Yan, 2012). Students are engaged in a task when they experience it as highly interesting, find it challenging, and perceive themselves as highly skilled in accomplishing it, that is, the situation is an optimal learning moment (Schneider et al., 2016).

3. Implementation of the project plan: Learning Management Using project-based learning improves students' interest in learning majors, makes students more relaxed in the learning process, stimulates students' sense of innovation, and cultivates students' sense of teamwork. (Liu, 2015)problem-solving creatively, flexibility, and originality (Duchovicova et al., 2018)

4. Evaluation and Reflection: Learning Management Using project-based learning is conducive to cultivating students' evaluation of their work, knowing their shortcomings in work, making use of the existing studio platform of the school, and completing work tasks according to customer requirements, to experience the joy of success in work (Li, 2014)It makes a strong connection between students' engagement in their projects and their learning outcome (Pedersen and Hobye, 2020).

Recommendation

The use of project-based learning (PBL) in a learning management system (LMS) can have a significant impact on improving graphic design abilities. This approach fosters hands-on experience, creativity, problem-solving, and critical thinking skills, which are all crucial in the field of graphic design. Here are some recommendations on how to effectively implement PBL in an LMS to enhance graphic design abilities:

1. Clear Learning Objectives, start by defining clear learning objectives for each project. Ensure that these objectives align with the specific graphic design skills and concepts you want students to acquire.

2. Engaging Projects, Design projects that are engaging and relevant to the real-world practice of graphic design. Encourage students to work on projects that simulate actual client work, such as designing logos, posters, or websites.

3. Resources and Materials, Provide students with access to a wide range of graphic design tools and resources within the LMS. This might include design software, tutorials, stock images, and templates.

Citation
Liu, J., Choicharoen, T., & Juithong, S. (2023). Effect of Learning Management Using Project-Based Learning on Graphic Design Ability of Sophomore Students at Suzhou Institute of Art and Design, the People's Republic of China. International Journal of Sociologies and Anthropologies Science Reviews, 3 (6), 275-280; DOI: https://doi.org/10.60027/ijsasr.2023.3476

International Journal of Sociologies and Anthropologies Science Reviews (IJSASR), 3 (6), November-December 2023, pages 275-280. Old ISSN 2774-0366: New ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index
DOI: https://doi.org/10.60027/ijsasr.2023.3476

4. Collaboration Opportunities, Encourage collaboration among students. Graphic designers often work in teams or with clients, so collaborative projects can simulate real-world scenarios. Use LMS features like discussion forums, group assignments, or video conferencing for this purpose.

5. Feedback Mechanisms, establish a system for providing regular and constructive feedback on students' work. Encourage peer feedback and self-assessment as well. The LMS can facilitate this through discussion boards, comments on assignments, or dedicated feedback forms.

6. Mentorship, if possible, provides students with access to experienced graphic design mentors or instructors who can offer guidance, answer questions, and provide additional insights into the design process.

By implementing these recommendations, you can create an effective learning environment within an LMS that enhances students' graphic design abilities through project-based learning. This approach not only builds technical skills but also fosters creativity and problem-solving, preparing students for success in the field of graphic design.

References

Cao, L. (2007). *Study on a theoretical model and measurement system of customer satisfaction.* Journal of the Hubei University of Economics.

Dai, X.L., Guo, K., Liu, L. (2017). An empirical study on the factors influencing MOOC learners' satisfaction based on the structural equation analysis of "Chinese university MOOC" learners' questionnaire, *Modern distance education.* 2, 17–23.

Duchovicova, J., Sabo, A., Petrova, G., & Hosova, D. (2018). Stimulation of creativity as a prerequisite of permanent sustainability forms the personality development of gifted learners. Journal of Interdisciplinary Research, 8(2), 54−60.

Edutopia. (2016). *New teachers: Classroom-Management fundamentals.* Retrieved on 25 August 2016 from, https://www.edutopia.org/article/new-teachers-classroom-management-resources

Hidi, S., & Renninger, K. A. (2006). The Four-Phase Model of Interest Development. *Educational Psychologist*, 41, 111-127. http://dx.doi.org/10.1207/s15326985ep4102_4

Li, Y. (2014). *On the Aesthetic Characteristics of Graphic Design Components.* Henan Art Vocational College, Zhengzhou.

Liu, H.Y. (2015). *Research on the application of Project Teaching Method in the teaching of Graphic Design in secondary vocational schools*. Henan Art Vocational College, Zhengzhou.

Pedersen, S., & Hobye, M. (2020). Implications of assessing student-driven projects: A case study of possible challenges and an argument for reflexivity. *Education Sciences*, 10 (1), 19. https://doi.org/10.3390/educsci10010019

Schneider, B., Krajcik, J., Lavonen, J., Salmela-Aro, K., Broda, M., Spicer, J., Bruner, J., Moeller, J., Linnansaari, J., Juuti, K., & Viljaranta, J. (2016). Investigating Optimal Learning Moments in U.S. and Finnish Science Classes. *Journal of Research in Science Teaching*, *53*(3), 400-421. https://doi.org/10.1002/tea.21306

Vogler, J.S., Thompson, P., Davis, D.W., Mayfield, B.E., Finley, P.M. & Yasseri, D., 2018, The hard work of soft skills: augmenting the project-based learning experience with interdisciplinary teamwork. *Instructional Science.* 46(3), 457-488. doi: 10.1007/s11251-017-9438-9.

Wang, X.Y. (2017). *Art and Design in Secondary Vocational Schools - Exploration and Application of Project Teaching Methodology - Taking Visual Communication Direction as an Example.* Guangdong Technical Teachers' Normal College.

Wang, Z. (2016). *Lack of relevance in content, lack of attractiveness in form, and unsatisfactory training affect teacher training work to be carried out more effectively.* Retrieved from: https://www.docin.com/p-1669891415.html

Wang, Z. 2012). *The exploration and practice of project teaching methods in the course of "Web Design and Production" in technical colleges.* Nanchang University

Yan, L. (2012). *Application of Project Teaching Method in Computer Courses of Higher Vocational Colleges.* Hebei Normal University

Yuan, L.Y., & Li, B.F. (2017). *On the application strategies of color, graphics, and text in graphic design.* Small and medium-sized Enterprise Management and Technology.

Zhao, Q.Q. (2016). *Research on the application of project teaching method in secondary vocational image processing class course with Photoshop course as an example*. Northwest Normal University.

Citation
Liu, J., Choicharoen, T., & Juithong, S. (2023). Effect of Learning Management Using Project-Based Learning on Graphic Design Ability of Sophomore Students at Suzhou Institute of Art and Design, the People's Republic of China. International Journal of Sociologies and Anthropologies Science Reviews, 3 (6), 275-280; DOI: https://doi.org/10.60027/ijsasr.2023.3476