Blended Learning Design Based on Competency-Based Lesson Plans using the MIAP Process in a Word Processing Course

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Received: April 19, 2025; Revised: October 13, 2025; Accepted: October 21, 2025

Please cite as: Kanharin, S., Khumtrup, P. & Chuangsin, W. (2025). S Blended Learning Design Based on Competency-Based Lesson Plans using the MIAP Process in a Word Processing Course. *International Journal of Educational Communications and Technology*, *5*(2), 51–64.

ABSTRACT: *Competency-based Blended Learning Design using the MIAP process in a word processing course is an essential skill in the* 21*st century. MIAP and blended learning uses MOOC technology to create learning materials that focus on self-learning with the support of video media, teaching materials and the demonstration of operational procedures. The objectives of this study were to (*1) *study and synthesize the conceptual framework of blended learning based on a competency-based lesson plan using the MIAP process in a word processing course (*2) *design a blended learning approach based on a competency-based lesson plan using the MIAP process and (*3) *assess the appropriateness of the blended learning design based on a competency-based lesson plan using the MIAP process in a word processing course. Participants in the research are experts from many institutions with knowledge and ability in learning design, including teaching and learning systems.*

*The results of the study showed that (*1) *in terms of the appropriateness of designing blended learning according to a competency-based lesson plan using the MIAP process, it was deemed to operate at the most suitable overall level (*M = 4.80, SD = 0.43) (2) *the suitability of the competency-based blended learning design using the MIAP Process was deemed to be the highest overall (*M = 4.81, SD = 0.25).*There are appropriate elements that can be used as a guide for learning involving the use of a problem-solving process by encouraging learners to develop a systematic and practical process when it comes to critical thinking.*

Keywords: Competency-Based Lesson Plans, Blended Learning, MIAP Process

1. Introduction

Vocational education under the supervision of the Office of the Vocational Education Commission focuses on developing students' professional skills in line with the needs of the labor market in the digital era. In addition, the emphasis is on developing problem-solving skills and creativity to prepare learners to face changes and challenges in an ever-changing work environment. The curriculum of the Office of the Vocational Education Commission focuses on developing students' potential to solve problems effectively and creatively, especially by applying new technologies to develop a modern and highly flexible learning experience (Office of the Vocational Education Commission, 2021).

At present, information technology is developing rapidly and continuously. As a result, it inevitably plays an important role in education. Self-paced learning and the connection of knowledge from imagination to concrete help learners develop essential skills such as teamwork, creativity, and good communication. Learners can access knowledge from a variety of teaching materials, both print and digital media, by having the skills to search for and use information technology. Therefore, learners need to be able to search for and verify the accuracy of information MIAP process is

a learning approach with a clear structure consisting of 4 stages: Motivation that stimulates the interest of learners; Information that provides opportunities for learners to research and study content; Attempt stage Application that emphasizes practice and achievement; and the Progress stage that evaluates and reflects the results of the learning that has taken place. This process allows learners to develop their knowledge and skills in a systematic manner, in conjunction with promoting self-learning and effective problem-solving (Kladchuen & Sinthanakul, 2019). The MIAP process is a learning management approach that focuses on developing the competencies of learners. It focuses on practical training and skill development that can be applied in the work context. This process consists of 4 key steps. These include Motivation. This stimulates learners' interest and prepares them before addressing the material. Information. This is the presentation of important content through the use of effective teaching materials. Application. This is a process by which learners practice skills. Progress. This evaluates and monitors the progress of the learner so that they can continuously improve their learning. Several studies support the view that MIAP It is an appropriate approach to professional education and learning, one which focuses on developing skills that can be applied effectively in real-world situations. The approach helps to enhance an immersive and interactive learning experience. As a result, learners can develop their professional competencies better and be ready to enter the employment market (Thongprasit & Piriyasurawong, 2023).

Blended learning is a learning management approach that combines face-to-face learning and online learning through digital media. It emphasizes the use of information and communication technology as a tool to promote learning. Learning in this way helps to learners ICT literacy skills. This enables learners to access, manage, and apply information effectively. It also improves academic achievement and supports lifelong learning. It is a learning management approach that has received a lot of attention in educational research because it can be used to integrate traditional teaching and learning with the use of digital technology to increase learning efficiency and flexibility. Learners can access content in both synchronous and asynchronous formats through the learning management system (LMS) (Chachiyo & Chachiyo, 2023). and complementary platforms such as Augmented Reality (AR), Virtual Reality (VR) and Metaverse. This enhances an interactive and immersive learning experience, especially in technology and science education. The application of this approach in educational research not only enhances learning but is also an important strategy that can be tailored to the needs of learners in the 20th century (Karapakdee et al., 2023).

The use of competency-based lesson plans is a learning management approach that focuses on developing learners in such a way that they have the ability to perform effectively. It focuses on training the skills necessary for a career or real-life situation through hands-on learning. This type of learning helps learners develop knowledge, skills, and attitudes that are appropriate for professional life based on a clearly structured learning process. It also emphasizes practical evaluation, which helps learners to effectively apply knowledge in real-world situations (Kladchuen & Sinthanakul, 2019). Based on the above principles and theories, the research team is interested in developing a blended learning design according to the competency-based lesson plan. MIAP is used in teaching and learning management in the provision of word processing program courses to strengthen the necessary skills and competencies of learners. Learning is designed to focus on self-paced learning through the platform. MOOC is an open learning system that allows learners to access content conveniently and flexibly, using teaching materials consisting of video clips demonstrating the operating procedures. Teaching materials and work is set up in such a way that learners can practice and develop their operational skills systematically. In addition, this learning approach also helps learners gain an in-depth understanding of the content. They can apply knowledge effectively, which results in higher academic achievement. It also supports the concept of lifelong learning that helps learners apply their knowledge to continuous self-development, both in the context of education and future work.

From studying, analyzing and synthesizing documents and research related to the design of blended learning according to the competency-based lesson plan in line with the MIAP process it is possible guide the conceptual framework for research. This relates to the design of a blended learning approach based on competency-based lesson plans with the use of the MIAP Word Processing Program as shown in figure 1.

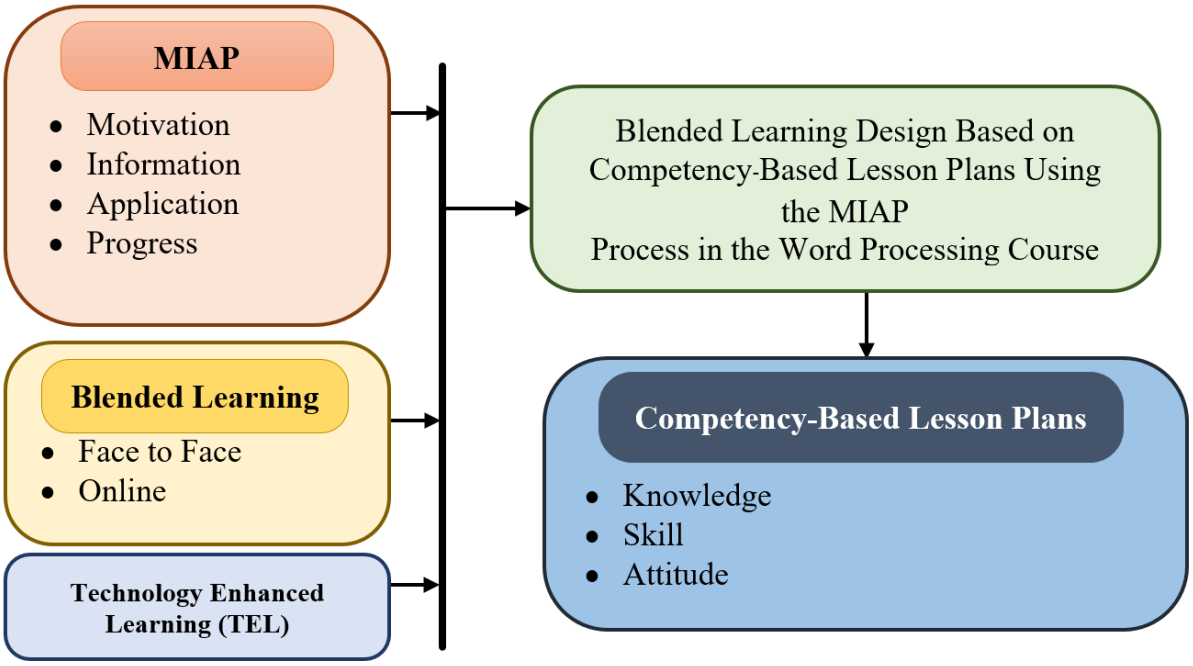

Figure 1. Conceptual framework for a blended learning design based on competency-based lesson plans using the MIAP process Word Processing Program Course

2. Research Objectives

2.1 To study and synthesize the conceptual blended learning framework with regard to a competency-based lesson plan with the use of the MIAP word processing program course
2.2 To the design of a blended learning approach with regard to a competency-based lesson plan with the use of the MIAP word processing program course
2.3 To assess the appropriateness of the blended learning design with regard to a competency-based lesson plan using the MIAP word processing program course

3. Methodology

This research relates to the design of a blended learning approach with regard to a competency-based lesson plan with the use of the MIAP word processing program course.

The research methodology is as follows:
1. Research participants consisting of 5 experts from various institutions with knowledge and competence in the field of learning design.
2. Tools used in research and statistics involving data analysis with regard to the research topic. The research team has chosen the following tools and statistics: (1) A competency-based blended learning design with the use of the MIAP process and (2) A competency-based blended learning design assessment form with regard to the MIAP process. Research methods in designing research methods, the research team used systematic method theory (Khemmani, 2018). as the basis for the design. This involves 3 steps as shown in Figure 2

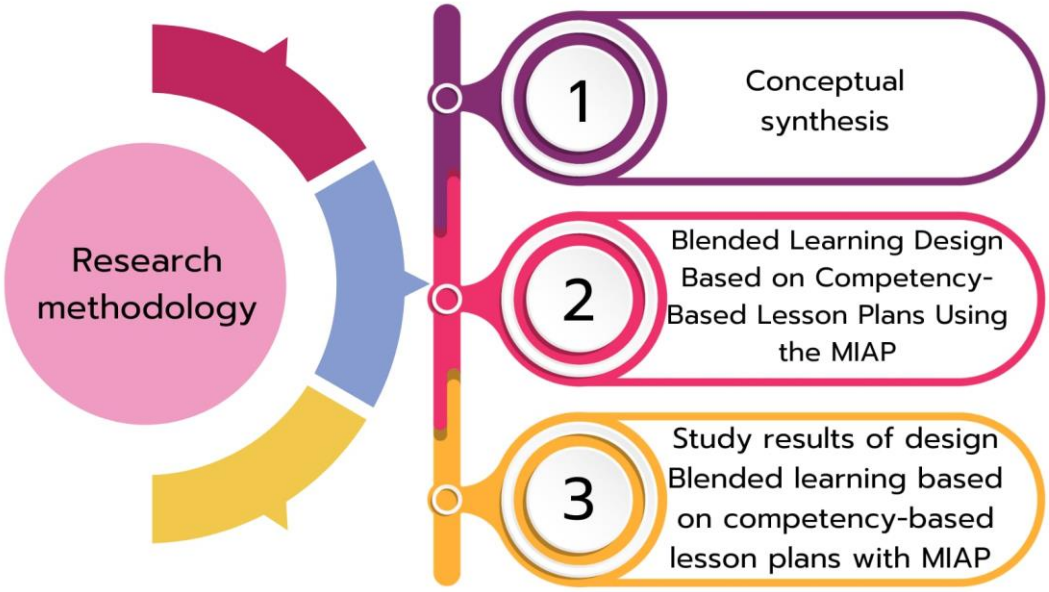

Figure 2. Research methodology

Step 1: Study, analyze and synthesize documents and research related to the design of a blended learning approach with regard to a competency-based lesson plan with the use of the MIAP process. This will be used as a guide to formulate a conceptual framework for the research.

Step 2: Design the blended learning approach. At this stage, the research team applied the principles of systems thinking (Khemmani, 2018). as a design guideline. This consists of 4 components: inputs, MIAP process with blended learning, output, and feedback.

Step 3: Study the results of the blended learning design. In this stage, the research team used research tools to conduct a study of the results of the application with the support of the research participants. This involved input from a specific selection of 5 experts from various institutions with knowledge and competence in the field of learning design, including teaching and learning systems, with evaluation and interpretation criteria (Dongre et al., 2024).

The MIAP word processing program course is a learning management approach that emphasizes that learners can develop their competencies in using word processors effectively. This type of learning combines traditional classroom learning and online learning by using digital technology to create a learning experience that meets the needs of today's learners. The MIAP process helps learners learn through examples, experiments, and practices. They interact with instructors and classmates and receive personalized learning through the system. MOOC will help them develop their skills and allow them to apply them in the real-world process (Sirirat et al., 2019). MIAP is a process aimed at changing the behavior of learners. There is interest. when they are given a new task that they have never done before, they will find it a problem and be interested in solving it. There are exercises so that learners can use the knowledge they have gained to solve problems, and clarify how the practice is correct or incorrect when it comes to solving problems. It can help learners learn in line with their goals. In order for learners to achieve the set learning objectives, the process can be divided into 5 parts according to the synthesis table. These are as shown in the following tables

1. Synthesis of the MIAP Teaching Process

Table 1. Synthesis ofthe MIAP teaching process

Synthesis									
MIAP Tutorial Process Synthesis	(Klinbumrung & Klinbumrung, 2020)	(Kladchuen & Sinthanakul, 2019)	(Benjamaha & Uantrai, 2021)	(Kaeomaungfang et al., 2021)	(Phunaploy et al., 2021)	(Thanachawengsakul & Jeerungsuwan, 2018)	(Prathoomthong, 2020)	(Thongprasit & Piriyasurawong, 2023)	**Selected format**
1. Motivation	✓	✓	✓	✓	✓	✓	✓	✓	✓
2. Information	✓	✓	✓	✓	✓	✓	✓	✓	✓
3. Application	✓	✓	✓	✓	✓	✓	✓	✓	✓
4. Progress	✓	✓	✓	✓	✓	✓	✓	✓	✓

From the table, it can be concluded that the MIAP teaching process consists of 4 steps as follows:
Step 1: Motivation: The instructor creates motivation by introducing the lesson by asking questions within the framework of the content according to the purpose of learning. This involves various media such as photos, videos, and problems, etc., which stimulates the learners' interest in learning.

Step 2: Information: Learners obtain information from the designated learning resources such as teaching materials including knowledge clips which take the form of demonstration videos.

Step 3: Application: The work order is the application of practical knowledge by practicing in class for a specified period of time. Once the information has been studied, the learner takes a post-class test.

Step 4: Progress: The instructor marks the post-class test and evaluates the performance according to the assessment form.

2. Blended Learning Synthesis

Table 2. Blended Learning Synthesis

Synthesis									
Blended Learning Synthesis	(Saenboonsong & Sintanakul, 2017)	(Kladchuen & Sinthanakul, 2019)	(Srichailard & Sinthanakul, 2017)	(Souththaboualy et al., 2021)	(Chachiyo & Chachiyo, 2023)	(Rugyai et al., 2024)	(García-Hirschfeld et al., 2025)	(Jiang & Niu., 2025)	**Selected format**
1. Face-to-face learning	✓	✓	✓	✓	✓	✓	✓	✓	✓
2. Online learning	✓	✓	✓	✓	✓	✓	✓	✓	✓

From the table, it can be seen that blended learning has 2 main components. These are as follows:
1. Face-to-face learning: This takes the form of traditional classroom learning in which teachers and learners interact face-to-face.

2. Online learning: This is learning that involves advanced technology where online computer media is used in the learning activities. Students are allowed to learn even if they are not in the classroom, with the division of learning periods inside and outside the classroom depending on the appropriateness of the content, the learning objectives, as well as the availability of equipment, learners and instructors.

3. MIAP teaching and learning model in combination with blended learning

Table 3. MIAP teaching and learning model in combination with blended learning

MIAP LearningProcess	**Blended Learning**		**cite**
	Face to Face	**Online**	
1. Motivation	✓	✓	(Saenboonsong & Sintanakul, 2017)
2. Information	✓	✓	(Kladchuen & Sinthanakul, 2019)
3. Application	✓	✓	(Srichailard & Sinthanakul, 2017)
4. Progress	✓	✓	(Phengpinyo & Sintanakul, 2019)

From the table, it can be seen that the teaching and learning model is based on the MIAP learning process. Together with the developed blended learning approach there are 4 aspects. These are as follows:
Step 1 Motivation: 1.1 Face to Face Learning 1.2 Online Learning. The class lesson starts by the instructor asking questions that are related to topics and issues that learners encounter in real life. Graphic media or short videos are used to stimulate their interest.

Step 2 Information: 2.1 Online Learning 2.2 Face-to-Face Learning. The MOOC system is used as a comprehensive learning resource with lesson materials, demonstration videos, and graphic files that explain the situation in detail.

Step 3 Application: 3.1 Online learning 3.2 Face-to-face learning. In terms of effort, learners apply their knowledge by taking tests as part of the MOOC system. They send completed worksheets through the online system to allow the instructor to assess their understanding. This allows learners to practice following the work done in class. The emphasis is on laboratory practice

Step 4 Progress: 4.1 Online Learning 4.2 Face-to-Face Learning. The instructor answers quizzes through the MOOC system and displays the scores to the learners. It evaluates individual performance or class performance using the Rubrics tool.

4. Blended teaching and learning procedures with regard to a competency-based lesson plan with the use of the MIAP word processing program course involving instructors and learners

Table 4. Blended teaching and learning procedures with regard to a competency-based lesson plan with the use of the MIAP word processing program course involving instructors and learners

Competency-based blended learning with MIAP	**teacher**	**learner**
1. Motivation		
1.1 Face to Face	- Use interest-stimulating questions. - Explain the study agreement. - Present problems from real situations.	- Answer questions and leave comments. - Connect your own experience to the problem.
1.2 Online	- Assign pre-class quizzes through MOOC - Provide videos/multimedia to explain the topic.	- Take pre-class quizzes on MOOC - Watch videos to prepare for class.
2. Information		
1.1 Face to Face	- Explain more important content - Suggest additional research methods	- Listen and ask questions about the content - Analyze and discuss with friends
1.2 Online	- Prepare study materials/ explanatory videos. - Ask exploratory questions through the discussion board.	- Study content from MOOC and designated media - Research and answer questions in the discussion board.
3. Application		
1.1 Face to Face	- Assign practical activities in the classroom - Observe and give one-on-one advice.	- Practice fulfilling work orders and displaying work - Get suggestions and fix errors
1.2 Online	- Have learners take a quiz after class. - Assign group activities through online platforms	- Take a post-class quiz on a MOOC - Collaborate with friends and submit assignments through the system.
4. Progress		
1.1 Face to Face	- Evaluate classroom performance - Provide feedback	- Present and reflect on learning outcomes - Improve tasks according to instructions.
1.2 Online	- Answer quizzes and provide assessment results through MOOC	- Check scores and errors. - Comment and reflect on learning

Competency-based blended learning with MIAP	teacher	learner
	- Summarize content and provide opportunities for comment	

From the table, it can be seen that the teaching and learning model is based on the MIAP learning process. Together with the developed blended learning approach there are 4 aspects. These are as follows:
Step 1 Motivation: Learners are introduced to authentic scenarios such as preparing professional business documents. The instructor presents examples of inconsistent formatting and encourages students to identify errors and discuss appropriate solutions.

Step 2 Information: The instructor provides multimedia learning resources (e.g., video tutorials, sample templates, and instructional handouts) through the MOOC platform to demonstrate paragraph alignment, font style, spacing, and page layout techniques.

Step 3 Application: Learners practice formatting sample documents such as business letters, memos, and reports using Microsoft Word. They apply the learned techniques under instructor supervision and receive formative feedback throughout the process.

Step 4 Progress: Learners present their finalized documents for peer and instructor evaluation using established rubrics that assess formatting accuracy, consistency, and professional standards.

In summary, these steps illustrate how the MIAP process promotes competency-based learning through authentic, hands-on practice that enhances learners' self-directed and reflective skills in digital document creation.

5. Competency Based Lesson Plan Synthesis

Table 5. Competency Based Lesson Plan Synthesis

Synthetic							
Competency Based Lesson Plan	(Saenboonsong&Sintanakul, 2017)	(Kladchuen & Sinthanakul, 2019)	(Srichailard & Sinthanakul, 2017)	(Phengpinyo & Sintanakul, 2019)	(Haeoau, 2020)	(Prathoomthong et al., 2024)	**Selected format**
Knowledge	✓	✓	✓	✓	✓	✓	✓
Skill	✓	✓	✓	✓	✓	✓	✓
Attitude	✓	✓	✓	✓	✓	✓	✓

From the table, it can be seen that the lesson plan based on the use of word processing software includes 3 competencies. These are as follows:
1. Knowledge: This is an understanding of the basic principles of word processing, such as document formatting, page settings, and the use of basic tools such as templates and word error checking. Students must learn the standards for preparing business documents such as reports or official letters, in accordance with the principles.

2. Skill: This is the ability to use word processing programs fluently, including touch typing and using shortcuts to increase work efficiency. In addition, students must be able to manage document elements such as the creation of tables, images, and automated tables of content, as well as use online tools to collaborate and edit documents in a systematic manner.

3. Attitude: This refers to having a good attitude towards study and work. Students should be prudent and responsible for preparing documents correctly and with discipline. They should submit work on time and work well with others. In addition, they should be open to new learning and aim to constantly improve their skills with regard to using software.

4. Results

4.1 Results of the Blended Learning Design Based on a Competency-Based lesson plan with the use of the MIAP word processing program course

In terms of the synthesis of approaches to blended learning design involving the MIAP process, according to the competency-based lesson plan for the word processing program, the purpose is to guide learning management in such a way as to focus on developing learners' abilities in analytical thinking and systematic problem-solving. This is done through the appropriate and effective application of technology. Such an approach is based on a systematic approach. The aim is to equip learners with the necessary skills for application in both education and daily life, as well as to effectively support the transformation in the digital era. The design consists of 4 elements in the form of input, processes, MIAP, and blended learning. The output and feedback are ass shown in figure 3

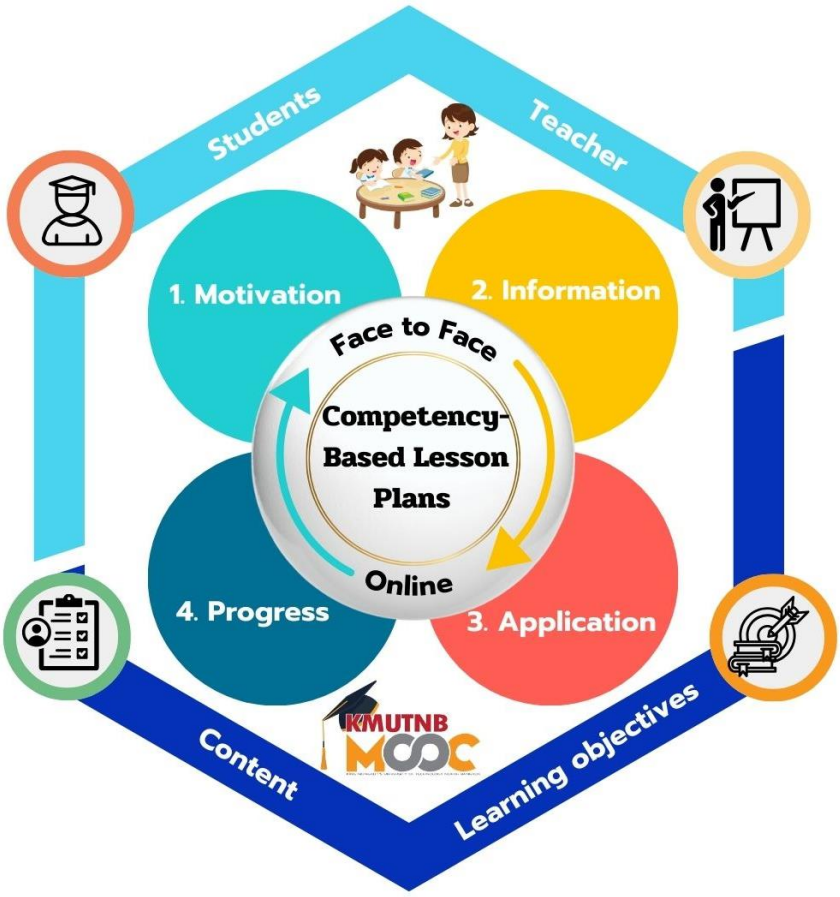

Figure 3. Blended Learning Design Based on Competency-Based Lesson Plans Using the MIAP Process in the Word Processing Course

As we can see f romFigure 3 t he compositionof the design :is as follows

1. Inputs
   1.1 Students
   1.2 Teacher
   1.3 Learning Objectives
   1.4 Content
   1.5 Technology

2. The process is formed by the integration of the MIAP approach and the blended learning process. The details are as follows:

   2.1 MIAP: This is a teaching process that is suitable for the management of education at the vocational level. MIAP is a teaching process in which the instructor must take practical action to ensure the progress of the process or the use of correct trial methods. It helps prevent accidents from occurring. This teaching process also covers the measurement of results in various learning units. The MIAP process involves 4 procedures. These are as follows:

   1. Motivation
   2. Information
   3. Application
   4. Progress

   2.2 Blended learning process. This involves 2 main components. These are as follows:

   1. Face-to-face learning
   2. Online Learning

3. Output. The competency-based lesson plan consists of 3 competencies. These are as follows
   1. Knowledge
   2. Skills
   3. Attitude
   4. Feedback

This involves student results in line with competency-based lesson plan measurement. It is the use of information from the learning process and the outcome stage. and attitude. It allows the instructor to analyze learning in such a way as to improve the learning process and make it appropriate for each step of the learning process. The MIAP approach is suitable for the development of skills necessary for the 21st century.

In terms of the appropriateness of the blended learning design based on a competency-based lesson plan using the MIAP process, the evaluation results indicated that the model was rated at the highest level ($M = 4.80, SD = 0.43$). This demonstrates that the proposed design possesses a high level of suitability for implementation in practical educational contexts, reflecting its efficiency and consistency with the expected learning outcomes.

4. 2 Results of the feasibility study of the design of a blended learning procedure with regard to a competency-based lesson plan with the use of the MIAP word processing program course.

The results with regard to the blended learning design are based on input from a specific selection of 5 experts from various institutions who have knowledge and competence in the field of teaching and learning design and development, as well as teaching and learning systems. This input is detailed in table 6 and table 7:

Table 6. Results of the Feasibility Assessment of a Blended Learning Design Based on a Competency- Based Lesson Plan with the use of the MIAP Process

Assessment List	Results of the Assessment Items		Interpretation
	M	***SD***	
1. To what extent are the principles and concepts used as the basis for learning design appropriate?	5.00	0.00	Highest
2. To what extentare the e lements ofthe l earningdesign appropriate? ** .Consider the aspects of inclusiveness according to the main elements of the general teaching and learning style			
2.1 Input factors	4.80	0.40	Highest
2.2 Blended learning process according to the competency-based lesson plan withthe use of the MIAP process	4.60	0.49	Highest
2.3 Output	4.80	0.40	Highest
2.4 Feedback	4.80	0.40	Highest

From table 6 it can be concluded that the design of a blended learning approach based on the competency based lesson plan with the use of the MIAP process has all the elements that can be used as a guide for the design of such a process. The MIAP process offers an essential attribute for learners in the field of systematic thinking and problem-solving through the effective use of technology.

Table 7. Results of the Feasibility Assessment of a Blended Learning Design Based on a Competency-Based Lesson Plan with the use of the MIAP Process

Assessment List	Results of the Assessment Items		Interpretation
	M	***SD***	
1. Input			
1.1 Students	4.60	0.49	Highest
1.2 Teacher	5.00	0.00	Highest
1.3 Learning objectives	5.00	0.00	Highest
1.4 Content	4.60	0.49	Highest
1.5 Technology	4.60	0.49	Highest
2. Process			
2.1 MIAP			
2.1.1 Motivation	5.00	0.00	Highest
2.1.2 Information	4.80	0.40	Highest
2.1.3 Application	4.60	0.49	Highest
2.1.4 Progress	5.00	0.00	Highest
2.2 Blended Learning			
2.2.1 Face to Face	4.80	0.40	Highest
2.2.2 Online	4.60	0.49	Highest
3. Output			
3.1 Competency-Based Lesson Plans			
3.1.1 Knowledge	5.00	0.00	Highest
3.1.2 Skill	4.60	0.49	Highest
3.1.3 Attitude	5.00	0.00	Highest
4. Feedback			
4.1 Results of evaluation of the Competency-Based Lesson Plans	5.00	0.00	Highest
Overall	4.81	0.25	Highest

From table 7 it can be seen that the results of the evaluation of the suitability of the blended learning design with regard to a competency-based lesson plan with the use of the MIAP process is deemed to achieve the highest overall level of suitability ($M = 4.81$, $SD = 0.25$). It can therefore be concluded that this approach has all the elements that can be used as a guide for learning through the application of the problem-solving process. This approach encourages learners to develop a systematic and practical thinking process, encouraging them to use systematic thinking and technology be able to effectively cope with problems that arise.

5. Discussion and Conclusion

In this research we have created and evaluated a learning design that integrates processes delivered through MOOC. In combining blended learning with technology, MOOC is used to create learning materials that focus on students learning on their own with the support of video media, various teaching materials and demonstrations of operational procedures. In the learning design, the word processing course consists of 4 main components as follows: 1. Inputs. This consists of students, Instructors, learning objectives, content, and technology 2. MIAP process. This operates in combination with blended learning 2. 1 The MIAP process consists of Motivation, Information, Application and Progress 2.2 Blended learning 2.1 Face to Face, 2.2 Online 3. Output. These consist of: Knowledge, Skill and Attitude 4. Feedback. This consists of the results of the evaluation of the competency-based lesson plans.

In terms of the results with regard to the word processing course it was found that: (1) the appropriateness of the design was deemed to be at the highest level and (2) the appropriateness of the blended learning design based on a competency-based lesson plan using the MIAP process was deemed to be at the most suitable overall level. Based on the results of the assessment it can be concluded that in terms of the design there are appropriate elements that can be used as a guide for designing similar approaches. This is in line with the development of a blended online teaching and learning model based on a competency-based lesson plan as suggested by (Kladchuen & Sinthanakul, 2019). who used a MIAP Information Communication and Network Course Using Learning System Schoology which emphasized that learners learn on their own from knowledge clips in the form of videos demonstrating the operating procedures and teaching materials. As a result, learners achieve operational competence and understand the content, all of which improves their academic achievement. It is also in line with what is said with regard to blended learning being applied to the development of competency-based teaching and learning styles (Saenboonsong & Sintanakul, 2017). who used the MIAP Learning Management System entitled ClassStart. Here the emphasis is on students learning both the theoretical part and practical procedures on their own from video media. In the computer-based graphic design course, students will have operational competence and achieve knowledge and understanding of the content, which will affect the teaching and learning management for learners. Using the process, (Srichaialard & Sinthanakul, 2017). used a MIAP Computer Graphics and Animation Course to provide students with durable learning skills and options for learning and reviewing lesson content. This ensured that learners performed well and benefitted from improved academic achievement.

Applicability Discussion: The blended MIAP model developed in this study demonstrates potential for application beyond the Word Processing course. Its systematic structure—consisting of the Motivation, Information, Application, and Progress stages—can be effectively adapted to other vocational and academic subjects that emphasize competency-based learning, such as Computer Programming, Business Communication, or Engineering Practice. Moreover, the model's flexibility allows for integration into different educational levels, including higher vocational education and undergraduate programs, by adjusting the complexity of tasks, learning materials, and assessment criteria. This adaptability highlights the MIAP model's capacity to serve as a pedagogical framework for enhancing learners' self-directed learning, critical thinking, and practical problem-solving skills across disciplines.

6. Limitations

This study acknowledges certain limitations that may affect the generalization of the findings. Firstly, the evaluation of the blended learning design was conducted with a relatively small group of experts, which may limit the diversity of perspectives and the comprehensiveness of the assessment. Secondly, the study did not include direct data on learners' performance outcomes, focusing instead on expert evaluations of the model's appropriateness. Future research should therefore expand the sample size to include a broader range of experts and incorporate empirical data from real learners to validate and strengthen the results.

7. Acknowledgements

The research team would like to thank the faculty members of the Master's Program, Faculty of Industrial Education**.** Information Technology for Communication and Education, as well as faculty members in Pathum Thani Technical College who gave advice**.** This helped the success of this academic article and allowed it to be used for academic benefit and further learning development**.**

research was supported by Sakon Nakhon Rajabhat University, Rajamangala University of Technology Srivijaya, Rajamangala University of Technology Lanna, SCM Technologies Company Limited and Division of Information and Communication Technology for Education, Faculty of Technical Education, King Mongkut's University of Technology North Bangkok (KMUTNB). The researchers would like to show appreciation in being supported for this research.

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