ERIC

| Collection | Thesaurus |

| Search education resources | Search | Advanced Search Tips |

☐ Peer reviewed only   ☐ Full text available on ERIC

ERIC indexes a wide variety of journal sources. The coverage of an approved journal source is determined by an examination of three to five current issues during the source review process, but may be updated at any time. Source coverage is defined as follows:

- **Comprehensively indexed** journals contain an average of 80% or more education-related articles; ERIC creates a bibliographic record for all articles in every acquired issue.
- **Selectively indexed** journals contain an average of 50-79% education-related articles and are critical to topic area coverage; ERIC applies a manual article-by-article selection process and indexes only the articles that conform to the standard and criteria outlined in the ERIC selection policy.

The journals currently approved for indexing in ERIC are listed below. The availability of records for an issue is dependent on content provided by the publisher. Click on the hyperlink to see all indexed material from each journal. To view the journals by topic area, click here. View this page as a PDF.

A | **B** | **C** | **D** | **E** | **F** | **G** | **H** | **I** | **J** | **K** | **L** | **M** | **N** | **O** | **P** | **Q** | **R** | **S** | **T** | **U** | **V** | **W** | X | **Y** | **Z**

A   Top

AASA Journal of Scholarship & Practice
About Campus
Academic Questions
Accounting Education
ACM Transactions on Computing Education
Across the Disciplines
Acta Didactica Napocensia
Acta Educationis Generalis
Action in Teacher Education
Action Learning: Research and Practice
Action, Criticism, and Theory for Music Education
Active Learning in Higher Education
Acuity: Journal of English Language Pedagogy, Literature and Culture
Administrative Issues Journal: Connecting Education, Practice, and Research
Adult Education Quarterly: A Journal of Research and Theory
Adult Learner: The Irish Journal of Adult and Community Education
Adult Learning
Adult Literacy Education
Adults Learning Mathematics
Advanced Education
Advances in Engineering Education
Advances in Health Sciences Education
Advances in Language and Literary Studies
Advances in Physiology Education
AERA Open
Africa Education Review
African Educational Research Journal
African Journal of Research in Mathematics, Science and Technology Education
Afterschool Matters
AILA Review
AILACTE Journal
Alabama Journal of Educational Leadership
Alberta Journal of Educational Research

Journal of College Student Retention: Research, Theory & Practice
Journal of Communication Pedagogy
Journal of Community Engagement and Higher Education
Journal of Comparative and International Higher Education
Journal of Computer Assisted Learning
Journal of Computers in Mathematics and Science Teaching
Journal of Computing in Higher Education
Journal of Continuing Higher Education
Journal of Correctional Education
Journal of Creative Behavior
Journal of Curriculum and Pedagogy
Journal of Curriculum Studies
Journal of Cybersecurity Education, Research and Practice
Journal of Dance Education
Journal of Deaf Studies and Deaf Education
Journal of Digital Learning in Teacher Education
Journal of Diversity in Higher Education
Journal of Drug Education
Journal of Early Adolescence
Journal of Early Childhood Literacy
Journal of Early Childhood Research
Journal of Early Childhood Teacher Education
Journal of Early Intervention
Journal of Economic Education
Journal of Education
Journal of Education and Educational Development
Journal of Education and e-Learning Research
Journal of Education and Learning
Journal of Education and Learning (EduLearn)
Journal of Education and Work
Journal of Education Finance
Journal of Education for Business
Journal of Education for Library and Information Science
Journal of Education for Students Placed at Risk
Journal of Education for Sustainable Development
Journal of Education for Teaching: International Research and Pedagogy
Journal of Education Human Resources
Journal of Education in Science, Environment and Health
Journal of Education Policy
Journal of Educational Administration
Journal of Educational Administration and History
Journal of Educational and Behavioral Statistics
Journal of Educational and Psychological Consultation
Journal of Educational Change
Journal of Educational Computing Research
Journal of Educational Data Mining
Journal of Educational Leadership and Policy Studies
Journal of Educational Measurement
Journal of Educational Media, Memory and Society
Journal of Educational Multimedia and Hypermedia
Journal of Educational Psychology
Journal of Educational Research
Journal of Educational Research and Innovation
Journal of Educational Research and Practice
Journal of Educational Sciences
Journal of Educational Supervision
Journal of Educational Technology
Journal of Educational Technology and Online Learning
Journal of Educational Technology Systems
Journal of Educators Online
Journal of Effective Teaching in Higher Education
Journal of Electronic Resources Librarianship
Journal of Emotional and Behavioral Disorders
Journal of Engineering Education
Journal of English as an International Language
Journal of English Teaching
Journal of Environmental Education
Journal of Ethnographic & Qualitative Research
Journal of Experiential Education

Development in Designing Competency-Based Learning Management According to the Guidelines for Driving the Economy (BCG Model) by Using the Concept of Proactive Learning Management for Students Practice Teaching Professional Experience

Kamolchart Klomim[1] & Boonsong Kuayngern[2]

[1] Faculty of Education, Phetchabun Rajabhat University, Thailand

[2] Faculty of Education, Pibulsongkram Rajabhat University, Thailand

Correspondence: Boonsong Kuayngern, Faculty of Education, Pibulsongkram Rajabhat University, Thailand.

Abstract

This research piece has the following goals: (1) to create a curriculum for creating a competency-based learning management system based on the economically motivated approach (BCG Model) by utilizing the proactive learning management concept for students practice teaching professional experience, (2) to assess the success of the curriculum in creating competency-based learning management utilizing the idea of proactive learning management for student practice teaching professional experience in accordance with the economic driving model (BCG Model), namely; (2.1) to compare the understanding of developing compe-tency-based learning management in accordance with the economic driving model (BCG Model) utilizing the idea of proactive learning management before and after learning, and (2.2) to assess the capacity to create a competency-based learning man-agement plan utilizing the proactive learning management concept in accordance with the economy-driven approach (BCG Model) compared to the criteria of 80%. In the second semester of the academic year 2022, there are 50 first-year teaching professional internship students in attendance. In the second semester of the academic year 2022, a total of 30 first-year teacher training students made up the sample. It makes use of a straightforward random sampling technique and a research and development (R&D) paradigm, which is typical in behavioral and social science research. The following resources were used in the study: (1) a test of knowledge on competency-based learning management system design, and (2) an operational capacity assessment form for creating a competency-based learning management strategy. Using proactive learning management concepts and knowledge comparison in the design of learning management, manage pre-learn and post-learn competency-based learning, using the t-test for dependent, data analysis is used to evaluate the suitability and effectiveness of the curriculum in the design of competency-based learning management in accordance with the economic-driven approach (BCG Model). Then use the t-test for one sample to assess the capacity to create a learning management plan based on post-learning competency versus the threshold of 80%.

The results of the study showed that; (1) the development of a curriculum in the design of competency-based learning management according to the economic-driven approach (BCG Model) using the concept of proactive learning management for students practice teaching professional experience, the innovation of competency-based learning management combined with work to develop competence for students, practice, teaching, and professional experience was successful at 81.74/82.19, the mean was 4.60, the standard deviation was 0.50, and the level at which it was most suited was 4.60, and (2) use the idea of proactive learning management for students' practice teaching professional experience to evaluate the efficiency of the curriculum in de-veloping competency-based learning management in accordance with the economic driving model (BCG Model), it was found that (2.1) students practice teaching professional experience knowledge in designing a competency-based learning management after learning was significantly higher than before learning at the .01 level, and (2.2) students practice teaching professional experience had the ability to prepare a learning management plan based on post-learning competency higher than the criteria of 80 percent at the statistical significance level of .01.

Keywords: curriculum development, competency-based learning management, driving the economy (BCG

Model), proactive learning management, students practice teaching professional experience

1. Introduction

The No.13 National Economic and Social Development Plan (2023–2027), according to the Royal Gazette, noted that at the basic education level at school age, basic education completion is still below the average of nations with similar levels of development. There must be opportunities for knowledge growth utilizing the multiple intelligences technique since some children and teens do not have trust in the educational system. Learning in the system is not connected to a way of life. In an aging culture with increasingly varied life stages, lifelong learning is an essential tool for people's de-velopment, combined with the development of a positive attitude toward education to encourage growth in thinking and self-improvement to do new things. However, many areas of life skills are still lacking in Thailand, including financial literacy, which can lead to people spiraling into both informal and formal debt, and digital literacy, which includes the capacity to deal with information that might be mistaken. This will have an impact on the learning system, which needs to be modified to allow for continuous learning and competency development. Including the ecosystem should enable lifelong learning for all segments of the population thoroughly and qualitatively in both real and virtual contexts, even when in-accessible groups need actions to remove various impediments so they may study and develop skills more completely.

When it comes to new models that effectively boost the efficiency of the Thai economy, inno-vation and technology are merged. Theoretical and practical perspectives on curriculum development are used in the creation of competency-based learning management in accordance with the BCG Model. The "BCG Model" is always one of the solutions offered by science. The "BCG Model" is a new eco-nomic strategy that uses technology, innovation, and science to propel the nation's growth in a leap-frogging path and to a more sustainable development. This holistic development will place a focus on creating a three-dimensional economy. However, when comparing income, it must be acknowledged that the Thai social structure and economic system are less developed than other business sectors. Traditionally, the Thai social structure and economic system are based on agriculture, with the number of workers in agriculture indicated up to 32.3%, the service sector is 7%, and the industrial sector is 17%. However, economic expansion presents prospects for income production, prosperity extends to everybody, and it must be acknowledged that when technology, innovation, and science are introduced, the majority of manufacturers are at the base of the pyramid. In addition to enhancing productivity, it simplifies and lowers manufacturing costs, and produce a wide range of goods; the summit of the pyra-mid will be made up of high-value goods. By utilizing Thai technology, this will lessen reliance on foreign technology and increase the chance for exporters and advancement in the industry.

According to a royal gazette announcement on learning outcomes details affirming higher education qualification standards for undergraduate students in 2022, the results that are produced to learners through the learning process acquired through education, training, or experience that results from practical training, or actual learning at work while they are studying, are referred to as stated learning outcomes. The specifics of the learning outcomes for bachelor's degrees focus on the data gathered through study, research, or experience gained through the course, which is necessary and sufficient for the use or expansion of knowledge in the workplace, daily life, social interaction, and sustainable growth. The ability to study, practice, and be adaptable, nimble, and competent is referred to be a survival skill for the digital age. These abilities may be used to advance one's career, academic or professional devel-opment, as well as social and personal growth. living in the digital age. Examples of skills include prob-lem-solving, critical thinking, creativity, learning, cooperation, teamwork, leadership, entrepreneurship, and multitasking. Ethics refers to human behaviour or activity that exemplifies virtue, morality, and eth-ics for the benefit of the public and oneself, both in front of and behind others. Giving students learning outcomes in terms of knowledge, skills, and ethics is the aim of modern teaching and learning.

Using the BCG Model's guiding principles, the researcher will develop learning management. The BCG Model is all about enhancing and adding value to already-existing resources or cultures via the use of technology knowledge and innovation. It focuses on areas like product manufacturing, trans-portation, the use of renewable energy, and infrastructure management. This aligns with proactive learning management concepts including STEM learning management, problem-based learning man-agement, and phenomena-based learning management. As seen in the aforementioned learning man-agement style example, situations are used to train students in independent knowledge acquisition, critical thinking, creativity, learning, communication, cooperation, teamwork, leadership, entrepreneur-ship, problem solving, coexisting with others, and producing goods for sale and use. The BCG Model includes the bio economy, circular economy, and green economy, three economic driving models that emphasize societal and environmental sustainability as well as the gradual and sustainable growth of businesses. The present model (BCG Model) has begun to be used to the business sector in

several nations in order to drive the economy. This is consistent with the sustainable development goals (SDGs), which are guiding principles for global development established by the United Nations (UN).

Through the establishment of the Sustainable Development Goals (SDGs), the United Nations established the 2030 Agenda for Sustainable Development as a shared development framework for the international community. It was learned from the analysis of the sustainable development report that Thailand is committed to adhering to global norms, including those established by international agree-ments and cooperation on sustainable development. With sustainable development being given high importance by the government, the objectives serve as suggestions for nations to work in order to pro-gress across all domains without leaving anybody behind. The Sustainable Development Committee, headed by the prime minister, and the Office of the National Economic and Social Development Council were established as the main policy-level bodies to oversee, support, and monitor its performance. The Office of the Secretariat is responsible for identifying issues, barriers, and operationally sound guidelines in addition to coordinating, monitoring, and evaluating the performance of both public and private agen-cies. It also recommends sustainable development policies and strategies to address all dimensions in a balanced and integrated manner. Goal 4 offers inclusive, egalitarian, high-quality education for every-one and promotes possibilities for lifelong learning, notwithstanding its challenging situation. The sec-ondary school graduation rate is still a challenge, despite a trend for these indicators' scores to rise until the goal can be achieved and in accordance with the plan by the year 2030. Report on Sustainable De-velopment: SDR, 2022.

The researcher selected the proactive learning management model because it offers the follow-ing advantages for developing successful teaching and learning to achieve learning outcomes for stu-dents; (1) plan learning that maximizes cognitive abilities, such as thinking, problem-solving, and appli-cation of information, (2) set up the learning environment so that students may engage in as much of the learning process as possible, (3) arrange for learners to build a body of knowledge and manage their own learning process, (4) provide learners to participate in learning both in terms of building knowledge, creating cooperative interaction, creating cooperation rather than competition, (5) arrange for learners to learn about shared responsibility discipline in doing tasks and division of responsibilities in various mis-sions, (6) organize learning processes that create situations for learners to read, speak, listen, think deeply, learners will be the ones who organize their own learning, (7) organize learning management activities that emphasize higher thinking skills, (8) organize activities that allow learners to integrate information, news or information and concepts and concepts, (9) the instructor will be the facilitator of learning management. for students to practice by themselves, and (10) organize the process of creating knowledge from experience. knowledge building and student review summaries. The nature of activities that are proactive learning management are as follows; (1) lessen the direct role of teachers in instruct-ing and educating students, while allowing students to contribute to knowledge development and design a system of self-learning, (2) learning development activities that help learners use their knowledge and understanding to be able to synthesize, evaluate, build, and create things at a higher level, (3) educa-tional activities that help pupils understand the issues facing their local area, society, or the country, (4) using newly learned skills to solve issues or respond to new circumstances is known as an activity, (5) activities focusing on students to use their own ideas rationally, have the opportunity to participate in discussions. and presenting the work, and (6) the exercise places a strong emphasis on the communi-cation between students and teachers as well as between students themselves (Proactive Learning Management Guidelines, 2022).

According to the current issues in teaching and learning, the first-year teacher professional intern-ship students' curriculum development course revealed that the students still lacked the skills needed for careers in education, including critical thinking, reasoning, creativity, learning, communication, coop-eration, working as a team, leadership, entrepreneurship, problem solving, coexistence, and multitask-ing. So, another model and learning system that will lead to the reform of the learning process in re-sponse to changes in the 21st century is the development of a competency-based learning management design curriculum in line with the BCG Model approach to driving the economy and utilizing the idea of proactive learning management for students undergoing their first year of teacher training. In order to elevate Thai education and achieve the goals of the master plan as part of the national strategy, it is necessary to establish a technique that is a fundamental mechanism for the development of a learning model and system. The acquisition of a standard-compliant education, the possession of learning aptitudes and internationally applicable skills, and increased access to lifelong learning are essential for Thai residents. It may also act as a model for defining standards for quality innovation and reducing educational inequality and the deterioration in ed-ucational quality.

2. Objective

1) To create a curriculum for creating a competency-based learning management system based on the

economically motivated approach (BCG Model) by utilizing the proactive learning management concept for students practice teaching professional experience.

2) To assess the success of the curriculum in creating competency-based learning management utilizing the idea of proactive learning management for student practice teaching professional experience in accordance with the economic driving model (BCG Model).

2.1) To compare the understanding of developing competency-based learning management in accordance with the economic driving model (BCG Model) utilizing the idea of proactive learning man-agement before and after learning.

2.2) To assess the capacity to create a competency-based learning management plan utilizing the proactive learning management concept in accordance with the economy-driven approach (BCG Model) compared to the criteria of 80%.

3. Materials and Methods

The research and development (R&D) model, which is separated into two phases as follows, is used in this study to conduct behavioral science and social science research procedures.

Phase 1: Curriculum development in designing competency-based learning management based on economic driving guidelines (BCG Model) using the concept of proactive learning management for students practice teaching professional experience. The research was divided into four sections for curriculum development in creating competency-based learning management in line with the approach to driving economy (BCG Model), applying the idea of proactive learning management for students practice teaching professional experience.

***Step 1*:** Review pertinent texts, papers, and research to get a basic understanding of the problems and suggestions for creating competency-based learning management strategies for students acquiring professional experience. Five experts were interviewed one at a time to gather information from primary sources; the experts were chosen based on their training, experience, and expertise. The problem will be analyzed using the information gathered, and recommendations for improving the ability to develop learning management strategies based on the competency of student teachers will be synthesized. As follows; (1) academics and instructors with research results on economic propulsion (BCG Model), amount 2 persons, (2) academics who have two people's worth of study findings in curricular or competency-based learning management, and (3) one professor who specializes in measuring and assessment, based on the proficiency of the instructor professional experience internship students, identify issues and recommendations for the construction of learning management systems.

***Step 2*:** Reading and gathering data from books, articles, and research relevant to the concepts of curriculum development, competency-based learning management design, and the concept of driving the economy (BCG Model) can help you do research on the concept of curriculum development in competency-based learning management. By using the data to analyze and synthesize the curriculum development process, curriculum elements, and the essence of the concept, it is possible to create concepts and guiding principles for learning management curriculum development that are based on the skills of students currently enrolled in teacher preparation programs.

***Step 3*:** In accordance with the recommendations of the BCG Model for promoting the economy, create a competency-based learning management design curriculum. Utilize any unsettling data, the study's first results, and the management design principles to get started. Next, understand the competence underpinnings of students' teaching experiences through the examination and synthesis of written materials, textbooks, relevant research, and professional input. Together with the findings from the second stage, these insights helped formulate concepts and guiding principles for curriculum development in competency-based learning management of students participating in teacher professional development, which were then used to develop a curriculum in designing competency-based learning management. Which contains the fol-lowing curriculum components; (1) course objectives, (2) guidelines for the design of competency-based learning management according to the guideline for driving economy (BCG Model), (3) learning materials, and (4) measurement and evaluation.

***Step 4*:** Use the proactive learning management concept to evaluate the quality and efficacy of the competent learning management design curriculum. This is done by showing the generated curriculum to five experts who will evaluate its applicability. The standard requirements must have an average of 3.50 or greater when utilizing the curriculum appropriateness evaluation form, which is a questionnaire with a five-point estimate scale. With a standard deviation of not more than 1.0, it is considered that the de-veloped curriculum is appropriate and can be used, it was found that the appropriateness was at the highest level, with a mean of 4.66 and a standard deviation

of 0.48, and the quality-checked curriculum was used for trial before further use. Additionally, by evaluating the process efficiency and results (E1/E2) with 9 non-sub-sample teachers internship students whose efficiency was 81.66/83.33, a curriculum on the design of competency learning management using the concept of proactive learning management is applied, and efficiency was found according to the specified criteria 80/80, and 25 professional internship students for field instructors, whose efficiency was 82.20/83.60.

Phase 2: Assessment of curriculum effectiveness in the design of competency-based learning management according to the economic-driven approach (BCG Model) using the concept of proactive learning management for students practice teaching professional experience. The research was divided into 4 steps as follows;

Step 1: Experimental preparation.

Population and sample.

(1) The research population was students practice teaching professional experience first year in the second semester of the academic year 2022, totaling 50 people.

(2) A simple random selection was utilized to choose the sample group for the study, which consisted of 30 first-year students who had professional teaching experience during the second semester of the academic year 2022.

Knowledge Quiz and Skill Quiz

The tools used in the research were divided into two types: (1) a knowledge test on the subject of a number of competency-based learning management designs, and (2) an assessment form for operational capability in preparing a competency-based learning management plan, with the following steps;

1.1) Knowledge test on the design of competency-based learning management. The re-search team created a knowledge test on the design of competency-based learning management with the following steps; (1) to study the concept and method of constructing a knowledge test, (2) study the measurement and evaluation methods from documents and textbooks on learning evaluation and evalu-ation, (3) analyze the content and learning objectives according to the competency-based learning management design and create a pre-learning and post-learning knowledge test, a multiple-choice test with 4 options, 20 questions, covering the entire content and aligning with the learning objectives, with a scoring criterion of 1 correct answer and 0 wrong answer, (4) bring the knowledge test to 5 experts to check the content validity, by analyzing the consistency index (Item-Objective Congruence Index: IOC), which has an IOC value between 0.80−1.00, (5) take the updated knowledge test to try it on the teacher professional internship students who look like a sample group, to analyze the cases, the difficulty-easy (P) value is 0.25−0.79, analyzing the discriminant power (r) was 0.2 or greater, and the confidence was an-alyzed using Kuder Richardson's KR-20 formula which was 0.87.

1.2) Assessment tool for planning a competency-based learning management system in practice. For the creation of a competency-based learning management plan, the research team developed a practice evaluation form, with the following steps; (1) examine the idea and process of developing a performance assessment form to be used in the creation of a competency-based learning management plan by defining specifics that are appropriate for the performance assessment to be used in the creation of a competency-based learning management plan, (2) create a practice evaluation form for the preparation of a com-petency-based learning management plan, using the rubric scoring criteria, determine the structure of the evaluation form for the preparation of a competency-based learning management plan competencies in 1 competency-based learning management plan consists of 5 elements, determine performance-based learning objectives, define learning material, define performance-based learning activities, define me-dia/learning resources appropriate for performance-based learning management, and assess learning results are a few of these, requisite knowledge for structured competency-based learning management, including experience with the assessment form needed to create a competency-based learning man-agement strategy, (3) determine the scoring of questions for each component at 4 levels, and determine the criteria for evaluating the practice in preparing the competency-based learning management plan, divided into 4 levels: should improve, fair, good, and very good, and define the criteria for interpreting competency results according to the rank formula (Boonchom Srisaard, 2003), (4) complete the practice assessment form for the updated competency-based learning management plan so that five experts may review it for content validity and objective consistency and offer criticism, take the results of consideration to analyze the consistency index (Item-Objective Congruence Index: IOC) which has an IOC value between 0.80−1.00, (5) with 25 teacher professional internship students who resembled a sample group, the practice assessment form for the creation of the modified competency-based learning management plan was assessed, and its reliability was found to be

equivalent to 0.88.

Step 2: Conducting experiments and collecting data.

Using the idea of proactive learning management for students to practice the developed teacher professional experience, the research team experimented with competency-based learning management design competency curriculum in accordance with the economic-driven approach (BCG Model), and collected data with samples, the steps are as follows;

(1) The first set of measurement and assessment, which takes three hours to complete, is the ability to design competency-based learning management, which includes knowledge in the design of competency-based learning management and practice in creating a competency-based learning management plan. Using the created proactive learning management idea, the researcher subsequently experimented with competence-based learning management design competency curriculum.

(2) Provide teaching and learning on competency-based learning management design using the developed proactive learning management concept for 4 weeks, 4 hours per day, in line with the strategy to drive the economy (BCG Model).

(3) Test your understanding of developing a competency-based learning management system for students who are gaining professional experience, as well as your proficiency in creating a competency-based learning management plan. The second set of measurement and assessment, which is parallel to the first set at the conclusion of the test, is used during the test's three hours of operation.

(4) One Group Pretest - Posttest Design was established, there were 2 experimental measure-ments, i.e., pretest and posttest.

Step 3: Data Analysis.

Data analysis using a computer program is packaged; (1) analyze the basic data of the sample with preliminary statistics, (2) evaluate process efficiency and outcomes (E1/E2) of competency learning management design courses using proactive learning management concepts, (3) a t-test with one sample at the statistical significance level of.01 and a t-test with dependent samples at the statistical significance level of.01 was used to compare the mean scores for the ability to design learning management on the pre-experimental and post-experimental performance of the sample group.

Step 4: Statistics used to analyze the data.

The statistics used to analyze the data are; (1) mean and standard deviation, (2) process effi-ciency and results (E1/E2), (3) one samples t–test, and (4) dependent Samples t–test.

4. Results

The research team in this study performed research in accordance with the goals of the study in the following chronological order;

1) The outcomes of curriculum development in building a competency-based learning manage-ment in line with the BCG Model's approach to driving economy by utilizing the idea of proactive learning management for instructors and students with experience, their outcomes were as follows;

1.1) The results of developing a curriculum for creating a competency-based learning management system in accordance with the strategy for driving the economy (BCG Model), using the concept of pro-active learning management for students completing teacher internships, and experts evaluating the suitability of a curriculum in management design, learn the competency base in accordance with the strategy for driving the economy (BCG Model), using the concept of pro-active learning management. The overall image, with a mean of 4.66 and a standard deviation of 0.48, was discovered to be the most appropriate.

1.2) The outcomes of the curriculum development for building competency-based learning management utilizing the proactive learning management concept in accordance with the economic driving model (BCG Model) are as follows;

Table 1. Shows the program's performance in creating competency-based learning management based on the BCG Model's economic-driven methodology while utilizing proactive learning management concepts

Course	Inter-Learning Score (E_1) 20 points	Post-test Score (E_2) 30 points
Score	493	509
Average	16.43	16.97
Percentage	82.16	84.83
E1/ E2 = 82.16/84.83		

From Table 1: It was discovered that the mean scores during learning with the curriculum in designing competency-based learning management in accordance with the approach to driving economy (BCG Model) using the concept of proactive learning management with an average of 16.43, representing 82.16 percent, and the average scores for assessing learning accomplishment using the curriculum to create a competency-based learning management system in accordance with the economic-driven approach (BCG Model) employing the idea of proactive learning management with an average of 16.97, or 84.83 percent. With an efficiency of 82.16/84.83, this competency-based learning management design course satisfies the established 80/80 efficiency criterion, it is based on the BCG Model and uses the proactive learning management concept.

2) Assessment results of curriculum effectiveness in developing competency-based learning management according to economic driving guidelines (BCG Model) using the concept of proactive learning management for teachers exercising professional expertise.

2.1) The students who received knowledge and understanding, the results were as follows;

Table 2. Knowledge comparisons for creating competency-based learning management utilizing the BCG Model economic driven guidelines and the idea of active learning management for students putting what they've learned into practice both before and after learning

Test	n	Full Score	$\bar{X}$	S.D.	$\bar{D}$	t	p-value
pre-test	30	20	13.56	0.56	3.40	19.97	.00
post-test	30	20	16.97	0.80			

Note. *p < .01.

From Table 2: The students participating in the teacher professional internship were familiar with the design of competency-based learning management that utilized the proactive learning management idea and followed the BCG Model's approach to drive the economy. An average score of 13.56 points was obtained before learning and 16.97 points was obtained after learning utilizing the proactive learning management method, and when comparing the scores before and after learning, it was found that the teacher professional internship students had knowledge in designing a competency-based learning management according to the economic-driven approach (BCG Model) using the concept of proactive learning management after learning was significantly higher than before learning at the statistical level .01

2.2) The students acted out what it would be like to be a teacher who could create a competency-based learning management plan in line with the BCG Model's strategy for promoting the economy using the proactive learning management concept, the outcomes can be seen as follows;

Table 3. Shows the comparison results of the ability to prepare a competency-based learning management plan according to the economic driven guidelines (BCG Model) using the proactive learning management concept for teacher professional experience training students compared to the criteria of 80%.

Test	n	Full Score	$\bar{X}$	S.D.	μo(80%)	t	p-value
post-test	30	20	17.10	0.71	16	8.46	.00

Note. *p < .01.

From Table 3: The teacher professional internship students were able to formulate a competency-based learning management plan according to the economy-driven approach (BCG Model) using the proactive learning management concept with an average score of 17.10, representing 85.50%. The teacher training students were

found to have the ability to create a competency-based learning management plan using the BCG model by using the proactive learning management concept after learning more than the criteria of 80% with statistical significance at the.01 level, when compared to the 80% criterion.

Students who have learned about and comprehended the competency-based learning management design in accordance with the Economic Driven Guidelines (BCG Model), using the proactive learning management concept for students to practice professional experience before and after learning, will be discovered to have done so. Dear, students in teacher preparation programs have knowledge of building competency-based learning management utilizing the notion of proactive learning management after learning higher than before learning, in accordance with the economy-driven approach (BCG Model). The BCG Model's principles for promoting the economy may be used by teachers to develop competency-based learning management plans that incorporate students obtaining practical experience as well as the concept of proactive learning management after learning more than the requirements.

5. Discussion

Findings from curriculum development in creating a competency-based learning management system that employs the concept of proactive learning management for instructors participating in professional experience, in line with the BCG Model approach to driving the economy, have the following important issues that need to be discussed;

1) The outcomes of the creation of the curriculum in the design of competency-based learning management in line with the strategy for advancing the economy (BCG Model) employing the idea of proactive learning management for students putting professional experience of teachers into practice.

1.1) The results of the curriculum development for the design of competency-based learning management using the concept of proactive learning management were at the highest level of appropri-ateness, with a mean of 4.66 and a standard deviation of 0.48, in accordance with the BCG Model's guidelines for driving the economy. This is due to the fact that the research team developed a curriculum using a research process that included identifying issues and providing guidelines for the design of learning management systems based on the proficiencies of students who were practicing teachers, gathering information from pertinent documents, books, and textbooks, and interviewing experts. Concepts and principles for curriculum development in learning management based on the competency of students practicing teachers professional experience were established using the concept of proactive learning management as well as studying the concept of curriculum development in competency-based learning management in accordance with the economic driving model (BCG Model). By analyzing and synthesizing the data and using expert evaluation of the curriculum's applicability, a competency-based learning management design curriculum may be created using the concept of proactive learning management and the approach of driving the economy (BCG Model). This is consistent with the study done by Chatchana Perespring (2021) which discovered that the training course's evaluation through quality assessment had an appro-priateness average of 4.45, which is at a highly acceptable level, it meets the acceptable requirements since its content validity value is 1, which is one. It was discovered that the outcomes of the expert assessment were adequate at a high level, which is consistent with Salinna Poomphanich (2017) it was discovered that the curriculum could be used when it was introduced to the pilot study, and in line with Ratima Singhachotsukphat (2020) found that the development of a virtual outdoor learning management model in conjunction with community-based learning management to promote a sense of commitment to citizenship among high school students. is appropriate at a high level.

1.2) Results of curriculum development in the design of competency-based learning management according to the approach to driving the economy (BCG Model) using the concept of proactive learning management, it has an efficiency of 82.16/84.83, meeting the defined 80/80 efficiency criteria. This is due to the fact that the study is conducted systematically in accordance with the research method, beginning with an analysis of the needs to create competency-based learning management that is integrated with the work of experts, and to design and develop a novel competency-based learning management system that is integrated with efforts to improve student competency and practicing teachers' professional experience, through experts to consider and verify as well as to find effectiveness with the non-sample group of teachers completing internships until their performance meets the required standards. Corresponding with the research of Chatchana Perespring (2021), the evaluation of the effectiveness of the developed training curriculum found that the mean scores for learning management design competency based on knowledge and practice competency in learning management design. The knowledge base performance of health education teachers after the experiment was higher than before the experiment at statistical significance at the .05 level. This is in line with the findings of Chayaphat Somkratok

(2020) found that the effectiveness of the developed training curriculum resulted in the experimental group being able to design learning management on life safety after the experiment, was significantly higher than before the experiment at the .05 level, and in accordance with the research results of Chuleeporn Surachot (2020) it was found that the ability of teachers in learning management design as a whole was at a high level, the cloud-based local knowledge-based learning model in an application environment was effective at 83.16/85.50.

2) Assessment of the efficiency of the curriculum in the creation of competency-based learning management using the proactive learning management concept for instructors gaining professional ex-perience in accordance with the economy-driven approach (BCG Model).

2.1) The teacher professional internship students had knowledge and understanding of the design of competency-based learning management in accordance with the approach to driving the economy (BCG Model), using the concept of proactive learning management, after learning was higher than before learning was higher than before learning at the statistically significant level of .01, This is because the curriculum on the design of competency-based learning management in accordance with the approach to driving the economy (BCG Model) using the concept of proactive learning management, there is an interest in the needs of society. As a result, students practice teaching professional experience with intention until they gain knowledge and understanding of the design of competency-based learning management according to the approach to driving the economy (BCG Model) by using the concept of proactive learning management. This is in line with the research of Salinna Poomphanich (2017) which found that teachers' knowledge of learning management design after implementing the enrichment curriculum was higher than the criteria of 75 percent with statistical significance at the .01 level. Apakorn Phodong (2017) found that students' knowledge and understanding of learning design after learning was higher than before learning at the statistical significance level of .05, and in line with Ratima Singhachotsukphat (2020) found that students who learned by using the virtual outdoor learning management model together with the community-based learning management had significantly higher scores after learning than before statistics .01

2.2) After learning more than the required 80 percent with statistical significance at the.01 level, teacher professional internship students were able to create a competency-based learning management plan in accordance with the BCG Model utilizing the proactive learning management concept. This is due to the curriculum's design of competency-based learning management in line with the strategy for fostering economic growth (BCG Model), which uses the idea of proactive learning management. Up until students begin to practice the teaching profession and develop competency with the learners by writing a learning management plan, it encourages skills and practices in learning-focused activities. Corresponding with Chatchana Perespring (2021) the evaluation of the effectiveness of the developed training curriculum found that the average scores for competency-based learning management design competence, knowledge and practice in the competency-based learning management design of the health education teachers after the experiment were higher than before the experiment with a statistical significance at the .05 level. Consistent with the research results of Chayaphat Somkratok (2020), it was found that the effectiveness of the developed training course resulted in the experimental group being able to design learning management on life safety after the experiment significantly higher than before the experiment, statistical significance at the .05 level. Consistent with the research of Salinna Poomphanich (2017), it was found that teachers were able to design learning management after using the enrichment curriculum higher than the criterion of 75 percent with statistical significance at the .01 level. Including Apakorn Phodong (2017) found that the ability to write learning management plans of student teachers was 82.13 percent higher than the 80 percent criterion set at a statistically significant level of .05, this is because the innovation of competency-based learning management is integrated with the work that allows students to produce work from local wisdom learning sources. In order to create their own learning management systems, students can practice leveraging the instructor's expertise in this way. In addition, they may utilize it to set up instruction in a step-by-step manner and solve issues in the actual world.

6. Conclusions

Therefore, the results can be concluded as follows;

1) The proactive learning management idea was used in the curriculum creation to create compe-tency-based learning management in accordance with the economic driving model (BCG Model);

1.1) The use of the proactive learning management concept in curriculum development for de-signing competency-based learning management in accordance with the approach to driving economy (BCG Model) was found to be appropriate at the highest level, with an average of 4.66 and a standard deviation of 0.48.

1.2) Using the idea of proactive learning management, a curriculum was developed for devel-oping a

competency-based learning management system that complies with the economic driving model (BCG Model) and has an efficiency of 82.16/84.83, exceeding the required 80/80 efficiency standard.

2) The findings of the assessment of the efficacy of the curriculum in the design of competen-cy-based learning management utilizing the idea of proactive learning management for teacher profes-sional experience training students, according to the economy-driven approach (BCG Model), discov-ered that;

2.1) The teacher professional internship students had knowledge and understanding of the de-sign of competency-based learning management in accordance with the approach to driving the econo-my (BCG Model), using the concept of proactive learning management, after learning was higher than before learning was higher than before learning at the statistically significant level of .01

2.2) By employing the proactive learning management concept and learning more than the re-quired threshold of 80% with a statistical significance at the.01 level, teacher training students were able to create a competency-based learning management plan based on the approach to driving the economy (BCG Model).

Acknowledgments

1. Suggestions for Applying Research Results

1.1) The idea of proactive learning management should be used before implementing the curriculum on the design of competency-based learning management in accordance with the economic driving model (BCG Model). Instructors should study the teaching standards related to the subject and make use of the learning management system in order to manage the teaching and learning to accomplish the desired goals.

1.2) The proactive learning management idea, which was published as an option for instructors to create another learning activity, should be used to implement the curriculum on the design of competency-based learning management in ac-cordance with the economic driving model (BCG Model).

2. Suggestions for Further Research

2.1) The research results from before, after, and during the study time are combined in this experiment, which is a single group study. In order to more clearly define the factors that impact learning within the context of the community and engagement in learning, the results of applying the research model experimentally are contrasted between experimental and control groups in the subsequent study.

2.2) In order to develop the professional learning community that society demands in educational institutions, the research team's creation of competency-based learning management, which it built to experiment with other issues, should be merged with work.

References

Bloom, B. S. (1956). *Taxonomy of Educational Objectives, the classification of educational goals – Handbook I: Cognitive Domain*. New York: McKay.

Kaiyawan, Y. (2016). *Experimental planning for research*. Bangkok: Chulalongkorn University Printing House. Retrieved from https://ph01.tci-thaijo.org/index.php/fit-ssru/article/view/248545

Kanchanawasi, S. (2001). *Selection of appropriate statistics for research* (4th ed.). Bangkok: Boonsiri Printing. Retrieved from https://so02.tci-thaijo.org/index.php/JournalGradVRU/article/view/203325

Karnasuta, P. (1995). *Statistics for Behavioral Science Research*. Bangkok: Publisher. Chulalongkorn University. Retrieved from https://so06.tci-thaijo.org/index.php/IJBS/search/authors/view?givenName=Jennifer&familyName=Chavanovanich&affiliation=Faculty%20of%20Psychology%2C%20Chulalongkorn%20University%2C%20Thailand&country=TH&authorName=Chavanovanich%2C%20Jennifer

Khaemmanee, T. (2005). *Variety of alternative teaching methods*. Bangkok: Dan Suttha Phim.

Kuder, G. F., & Richardson, M. W. (1937). The theory of the estimation of test reliability. *Psychometrika*, *2*(3), 151−160. https://doi.org/10.1007/BF02288391

Nilakorn, P. (2022). *Guidelines for proactive learning management*. Supervision group, follow up and evaluate the results of education management, Lampang Secondary Educational Service Area Office, Lamphun, Office of the Basic Education Commission Ministry of Education.

https://doi.org/10.1080/03055698.2022.2028608

Perespring, C. (2021). *Development of a competency-based learning management design promotion curriculum for health education teachers by using the concept of a peer cognitive coach and the concept of integrated learning management. Education degree program*. Doctor Department of Health and Physical Education Department of Curriculum and Instruction, Faculty of Education, Chulalongkorn University. https://doi.org/10.1097/JXX.0000000000000327

Phasiphon, C. (2015). *Learning Measurement and Evaluation*. Bangkok: Department of Research and Educational Psychology, Faculty of Education, Chulalongkorn University.

Phasiphon, C. (2016). *Learning Measurement and Evaluation. Learning Measurement andEvaluation*. Bangkok: Chulalongkorn University Printing House. Learning Analytics: Measurement Innovations to Support Employee Development – John R Mattox II, Mark Van Buren, Jean Martin – Google.

Phodong, A. (2017). *Development of additional curriculum. Faculty of Education, Nakhon Sawan Rajabhat Universit*y. Full article: Curriculum development, lesson planning, and delivery: A guide to Native language immersion (tandfonline.com).

Poomphanich, S. (2017). *The application of game-based activity patterns for class attendance and participation* (pp. 72−82). Participated in Class: A Case Study of Computer Engineering Students Bangkok University. In the 8th Hatyai National and International Academic Conference. Songkhla: University. https://doi.org/10.1080/00461520.2015.1122533

Rovinelli, R. J., & Hambleton, R. K. (1977). On the use of content specialists in the assessment of criterion-referenced test item validity. *Dutch Journal of Educational Research*, *2*, 49−60. On the use of content specialists in the assessment of criterion-referenced test item validity.

Singhachotsukphat, R. (2020). *The Evaluation of Information Studies Major Students' Satisfaction toward Teaching and Learning Process by using Kahoot!* Program. Information Studies Program, Faculty of Humanities, Srinakharinwirot University. https://doi.org/10.1016/j.compedu.2020.103818

Sitthisomboon, M. (2013). *Educational innovation development* [Online]. https://doi.org/10.1177/0895904811429288

Somkratok, C. (2020). *Development of a training curriculum by applying the concept of competency-based learning management in conjunction with professional learning communities to enhance the ability to design learning management on subject*. Life safety of health education teachers. Doctor of Education degree program. Department of Health and Physical Education Department of Curriculum and Instruction, Faculty of Education, Chulalongkorn University. https://doi.org/10.1515/ijnes-2019-0066

Srisaard, B. (2003). *Curriculum development and curriculum research*. Bangkok: Suweeriyasan.

Sukon, S. (2010). *Teaching and learning innovation for youth quality development*. Bangkok: Aksorn Charoen Tat.

Suphakij, P. (2019). *Development of supplementary curriculum to build competency in bilingual science learning management for teacher professional students in elementary education*. Doctor of Philosophy Program in Curriculum and Instruction (Curriculum and Supervision Group) model. 2.1 Doctor of Philosophy, Department of Curriculum and Teaching Methods, Graduate School Silpakorn University. https://doi.org/10.1080/tandf_crossmark_01

Surachot, C. (2020). *The development of learning management curriculum in the 20th century 21 using process professional learning community* (PLC). Doctor of Education Program Curriculum and Teaching Faculty of Education Burapha University. https://doi.org/10.1080/13562517.2021.1940923