

The Developing a Learning Management Model That Corresponds To Students in the Digital Age to Enhance Life and Work Skills in the 21st Century

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Abstract

The objectives of this research were three-fold: 1) To assess the learning management needs that were consistent with digital learners to enhance life and work skills in the 21st century. 2) To develop and assess the appropriateness of a learning management model that was consistent with digital learners to enhance life and work skills in the 21st century. 3) To assess the implementation of a learning management model that was consistent with digital learners to enhance life and work skills in the 21st century. The research and development methodology were applied through the collection of quantitative and qualitative data in the systematic analysis of the results. The results showed that 1) The highest results of the assessment of learning management needs that were consistent with digital learners to enhance life and work skills in the 21st century were Leadership and Responsibility (PNI = 0.035). 2) The results of the development and assessment of the appropriateness of learning management model that was consistent with digital learners to enhance life and work skills in the 21st century by experts found that, overall, all aspects were at the highest level where the mean (\bar{X}) = 4.86 and standard deviation (S.D.) = 0.08. 3) The assessment results on the implementation of a learning management model that was consistent with digital learners to enhance life and work skills in the 21st century could be divided into the following results: The assessment results on the implementation of a learning management model that was consistent with digital learners to enhance life and work skills in the 21st century (undergraduate) were (\bar{X}) = 4.75 and standard deviation (S.D.) = 0.43. The assessment results on the implementation of a learning management model that was consistent with digital learners to enhance life and work skills in the 21st century (student) was averaged (\bar{X}) = 86 and standard deviation (S.D.) = 14.72.

Keywords: Learning Management Model, Digital Learners, Life and Work Skills, 21st Century.

I. INTRODUCTION

The Ministry of Information and Communication Technology has developed a digital development plan for the economy and society to accelerate the use of digital technology as an important tool for driving the country's development, especially in education Ministry of Information and Communication Technology [1]. Nowadays, media, technology

and digital devices have become part of the lifestyle of people of all genders and ages. The rapid spread of media, technology and digital devices in the late 20th century affected the brain and learning development of children born at that time, which is known as “Digital Generation”, also known as “Digital Native” This is because the environment and childhood upbringing are very important and have a long-

term effect on the brain development of children, unlike the people who are known as "Digital Immigrant" who was born before the digital age but adopted digital technology later. The latter group is familiar with media and technology in the digital age when the brain is fully developed. Therefore, the impact on brain development and behavior is different from children born and raised with digital technology Nuanchan Juthaphakdeekul [2].

Although it is very difficult to separate children from digital media and online media completely, the key issue is how to enable children to use these new media in a beneficial way for life and learning Wilaiporn Jirawattanaset [3]. Amornrat Saekuang [4] introduced the teaching approach through the concept of teacher path from the "old era" to the "new era" in order to develop teaching and learning of teachers who pushed them to become a learning community as a path to develop teaching in the era of the transition to the 21st century. In this regard, learning skills, life skills, and communication skills with technology were required. Teachers need to continually improve themselves for quality and competence as teachers in the new era. Teaching materials play an important role in learning management as they serve as a medium for effective teaching and enable learners to understand the meaning of the lesson exactly as the teacher wants. Therefore, the role of Thai teachers in the 21st century has to be changed, which is to help learners learn and acquire knowledge and skills according to the curriculum. Moreover, it has been defined as a working strategy for the most effective learning management in the new era. Interaction with those around you, learning to live with others in society, emotional understanding of one's self and others, empathy, and generosity are important things that children should develop before they start using technology to achieve social recognition. On the other hand, teaching these things to children later is difficult because children who use digital media tend to be more

isolated and have less interaction with their peers, which negatively affects the emotional and social development of children Nuanchan Juthaphakdeekul [5].

Life and Career Skills are one of the 21st century skills that education circles around the world are keen on preparing students for life in the modern world. The development of life skills is stated in the 8th and 12th National Economic and Social Development Plans that... "Life skills should be strengthened in the course of teaching at all levels, including the development of knowledge and understanding in this subject properly and the ability to transfer various knowledge..." In addition, the core curriculum of basic education in 2008 stated about learner competency in item 4 that "Students have the ability to develop life skills" Ministry of Education [6]. Therefore, enhancing life and career skills plays an important role in preparing children and adults to live well with today's risks and challenges, including positive interactions and living together in society happily. The learning of life and work skills has a positive effect on the quality of education such as process-based learning for developing essential competencies, knowledge content related to daily life, and using learning techniques and processes to promote skill development and participatory learning.

Based on the aforementioned problems and importance, the researcher was interested in developing a learning management model that consistent with digital learners to enhance life and work skills in the 21st century, leading to more efficient and effective teaching and learning. The Faculty of Education, Bansomdejchaopraya Rajabhat University, was an agency related to the production of teachers, which focused on the development of student teacher quality in order to achieve quality and standards suitable for high-professionalism as a person with specific expertise. The results showed that most student teachers faced problems in instructional design due to their limited ability to design instruction, resulting in

the need to design instruction as a "fixed formula" to manage instruction in all classes. Such teaching was therefore inappropriate and consistent with the context of different and diverse classes Killen [7].

To solve such problems, the researcher applied the learning management model to develop student teachers in the Faculty of Education, Bansomdejchaopraya Rajabhat University. In this regard, workshops were used to develop knowledge and skills in instructional design in accordance with digital learners while enhancing life and work skills in the 21st century. Subsequently, a good lesson plan could be written and this learning management model could be integrated or inserted into normal teaching in the course, play, or student activities. The researchers monitored and evaluated the students themselves, their students, mentors, and school administrators using a variety of research tools. To enable student teachers who had graduated to practice as new teachers in educational institutions with quality and standards according to the aims of the Faculty, the Faculty of Education, Bansomdejchaopraya Rajabhat University was therefore an important part of preparing for the next quality citizen.

II. RESEARCH OBJECTIVES

The objectives of this research were 1) to assess the learning management needs of digital learners to enhance life and work skills in the 21st century, 2) to develop and assess the appropriateness of learning management models that were consistent with digital learners to enhance life and work skills in the 21st century, and 3) to evaluate the implementation of a learning management model that was consistent with digital learners to enhance life and work skills in the 21st century.

III. RESEARCH METHOD

Research and development methods research was designed which collects data for systematic analysis of both quantitative and qualitative

results. Sampling design researcher defined target groups according to the following.

1. The target group used in the assessment of learning management needs that were consistent with digital learners to enhance life and work skills in the 21st century were 400 teachers of schools under the Office of Secondary Education Service Area, Office of the Basic Education Commission, Ministry of Education. The samples were selected using Multi - Stage Random Sampling.
2. The target group used to assess the appropriateness of a learning management model that is consistent with digital learners to enhance life and work skills in the 21st century were 12 experts with experience in teaching and learning management. The selection criteria were: 1) 3 school administrators with at least 5 years of teaching and learning management experience 2) 3 teachers in higher education with doctoral degrees in curriculum and teaching and at least 5 years of teaching experience 3) 3 teachers in educational institutions with at least 5 years teaching experience and 4) 3 educational supervisors with at least 3 years of work experience.
3. The target group who experimented with a learning management model that was consistent with digital learners to enhance life and work skills in the 21st century (draft) were 10 fifth-year students, Faculty of Education, Bansomdejchaopraya Rajabhat University in the second semester of the 2017 academic year. The samples were selected using stratified random sampling.
4. The target group for monitoring and evaluating training on the use of a learning management model that was consistent with digital learners to enhance life and work skills in the 21st century (draft) were 10 school administrators of trained student teachers, and 100 students studying from trained student teachers. The samples were

selected using Multi - Stage Random Sampling. 10 mentors of trained student teachers using the selection method according to the specified criteria.

5. The target group used in the workshop on a learning management model that was consistent with digital learners to enhance life and work skills in the 21st century were 30 fourth-year students in the Faculty of Education, Bansomdejchaopraya Rajabhat University in the second semester of the 2017 academic year (those who were going to practice teaching professional experience) and in the first semester of the 2018 academic year. The samples were selected by stratified random sampling.
6. The target group for monitoring and evaluating training through the developed model was 30 school administrators of trained student teachers and 300 students studying from trained student teachers. The samples were selected using Multi - Stage Random Sampling. 30 mentors of trained student teachers using the selection method according to the specified criteria.

IV. RESULTS

Research on the development of a learning management model that was consistent with digital learners to enhance life and work skills in the 21st century using research and development methodologies, quantitative and qualitative data were collected for systematic results analysis. The results of the data analysis could be summarized in 3 parts as follows:

Part 1: The results of the assessment of the needs of learning management that were consistent with digital learners for enhancing life and work skills in the 21st century was shown in Table 1.

Table 1 *Prioritizing the realities and the probability of learning management in relation to digital learners to enhance life and work skills in the 21st century*

Behavior	Average reality	Average probability	PNI	No.
1. Flexibility and adaptability	4.27	4.39	0.023	2
2. Initiative and self-governance	4.28	4.30	0.005	4
3. Social skills and cross-cultural society	4.32	4.37	0.011	3
4. Being a creator and reliable responsibility	4.22	4.23	0.002	5
5. Leadership and Responsibility	4.35	4.51	0.035	1

In Table 1, overall, leadership and accountability were of the highest importance for the learning management with digital learners to enhance life and work skills in the 21st century (PNI = 0.035), followed by flexibility and adaptability (PNI = 0.023), social and cross-cultural skills (PNI = 0.011), initiative and self-governance (PNI = 0.005), and authorship and accountability (PNI = 0.002), respectively.

Part 2: The results of the development and assessment of the appropriateness of learning management models that were consistent with digital learners to enhance life and work skills in the 21st century was shown in Table 2.

Table 2 *Results of assessment of validity and appropriateness of learning management models that are consistent with digital learners to enhance life and work skills in the 21st century*

Assessment items	Mean (\bar{X})	Standard Deviation (S.D.)
1. Appropriateness of learning model	4.87	0.10
2. Completeness of learning model	4.87	0.21
3. Accuracy of learning model	4.85	0.10
4. Usefulness of learning model	4.84	0.18
Total	4.86	0.08

In Table 2, the results of the assessment of the validity and appropriateness of learning

management models that were consistent with digital learners to enhance life and work skills in the 21st century by experts found that, overall, all aspects were at the highest level, with the mean (\bar{X}) = 4.86 and standard deviation (S.D.) = 0.08.

Part 3: The evaluation results of the implementation of a learning management model that were consistent with digital learners to enhance life and work skills in the 21st century was shown in Tables 3 and 4.

Table 3 Assessment results of the implementation of learning management models that are consistent with digital learners to enhance life and work skills in the 21st century (undergraduate)

Assessment items	Mean (\bar{X})	Standard Deviation (S.D.)
1. Supervision on application of student learning management plans	4.77	0.42
2. Teaching supervision of students	4.73	0.45
Total	4.75	0.43

In Table 3, the results of applying a learning management model that were consistent with digital learners to enhance life and work skills in the 21st century, the researchers supervised teaching using a learning management model that was consistent with digital learners to enhance the 21st century life and work skills of trained students. They had a total mean score (\bar{X}) = 4.77 and standard deviation (S.D.) = 0.42. The results of supervisory assessment using a learning management model that is consistent with digital learners to enhance life and work skills in the 21st century, they had a total mean score (\bar{X}) = 4.73 and standard deviation (S.D.) = 0.45.

Table 4 Assessment results of the implementation of learning management models that are consistent with digital learners to enhance life and work skills in the 21st century (student)

Assessment items	Mean (\bar{X})	Standard Deviation (S.D.)
Assessment of students' 21 st century life and work skills	86	14.72
Total	86	14.72

In Table 4, the overall student life and work skills assessment in the 21st century had a total mean score (\bar{X}) = 86 and standard deviation (S.D.) = 14.72.

V. DISCUSSIONS

This research on the development of a learning management model that was consistent with digital learners to enhance life and work skills in the 21st century could be discussed as follows:

Part 1: The results of the assessment of the need for a learning management model that was consistent with digital learners to enhance life and work skills in the 21st century

The results of the assessment of the need for learning management models that were consistent with digital learners to enhance overall life and work skills in the 21st century was at the highest level in all aspects. Especially leadership and responsibility, learners needed to develop themselves as much as possible. Consistent with Sanit Noonil [8], social responsibility was an important issue that today's organizations needed to focus on because the operations of all organizations affected society and the environment both directly and indirectly. In addition, there had been a trend of calls for organizations to take serious social responsibility from various stakeholders. The success of an organization's socially responsible work depended on both internal and external factors. Leadership factors were critical to the performance of corporate social responsibility. This was because the key attributes of leadership were involved and

influencing the successful performance of corporate social responsibility.

Part 2: The results of the development and assessment of the appropriateness of a learning management model that is consistent with digital learners to enhance life and work skills in the 21st century.

The results showed that the development and appropriate assessment of the learning management model that was consistent with digital learners to enhance life and work skills in the 21st century were both at the highest level for the selection of experts through focus group discussions and the suitability of the model assessment process as a whole. This was due to the clarity of the learning management model development process. The researcher had applied the concept of learning management model development of Joyce and Weil [9] as a guideline for the development of learning management model, concepts on the building system or systematization of Thitsana Kaemmanee [10], including a study on the process of developing a learning management model from the research of Montree Yamkasikorn [11], Boonliang Tumthong [12], Prasit Soradet [13] and Man Chuabangkaew [14]. Such concepts and research had a similar development process in learning management under the concept of "basic information study, teaching modeling, quality acquisition and implementation". As the researcher proceeds through the development of this teaching model, a learning management model that was consistent with digital learners to enhance life and work skills in the 21st century was systematically and effectively related to the conceptual framework of the development of this learning management model. In particular, in the process of qualification of the learning management model and the implementation (quality check) process, it was discovered that the developed model was of good quality and could be applied in practice.

The findings reflected that this learning management model was very suitable as the teaching process had applied principles and theories that reflected the belief that education must be connected to online media. The most effective teaching was action and its association with purposeful experiences. It could be seen that an instructional process that emphasized the participation of learners as key learning actors in relation to society and their connection with online media and new experiences enabled them to develop their cognitive abilities, and skills necessary for systematic research. Consistent with the concept of constructivism that every learner had his or her own body of knowledge, the creation of a new body of knowledge required the use of existing knowledge in conjunction with the process of searching and examining knowledge by oneself. In this, learners would understand and acquire knowledge and the ability to create a body of knowledge on their own, resulting in learners with increased intellectual potential because "Inquiry-Based Learning" made students smarter. Consistent with the research results of Arunee Sathitphakeekul [15], Phongsri Kiatlertnapha [16] and Wicha Suangsawaeng [17] who gave suggestions in the same direction that there were 3 main processes in teaching model development as follows: 1) Teaching model development 2) Implementing teaching models 3) Improving the teaching model to achieve complete composition. These elements could demonstrate an effective teaching model.

Part 3: Assessment results of the implementation of a learning management model that was consistent with digital learners to enhance life and work skills in the 21st century.

A learning management model that was consistent with digital learners to enhance life and work skills in the 21st century, developed by the researcher using the principles and concepts of educational theory that focuses on student-centered learning. Importantly, it also

emphasized on meaningful and systematic learning, taking into account the basis of prior knowledge and linking to new knowledge in the form of self-construction and development of knowledge, including systematic thinking, monitoring, directing, and controlling one's own thoughts to enable learners to achieve their intended learning goals. Consistent with the research of Sommart Singku [18] and Wipha Nakvisut [19] who suggested in the same direction that developed learning activities should consist of an introductory step, defined as a step of reviewing prior knowledge as a problem-solving basis, and a teaching step, defined as a step of a problem-solving-oriented learning activity. The researchers also saw that it could be used as a guideline for developing a learning management model that is consistent with digital learners to enhance life and work skills in the 21st century. Therefore, the researcher had applied the concept in different situations. In teaching and learning management, the teacher was responsible for helping, advising, and providing an environment suitable for learning and a social context that facilitates learning. Some learning was invisible from behavioral expressions. Learning was based on the principles of memory, motivation and thinking, and reflection that demonstrated the learner's own learning process. The researcher therefore designed and implemented a strategy that allowed learners to access online learning materials and systematically ranked the content from easy to difficult. In addition, content was linked to help learners remember and recall that information better through a student-centered learning approach and teachers act as assistants to support learning, including acting as a facilitator or coach rather than a knowledge transfer. Moreover, emphasis was placed on applying knowledge to problem solving in various situations through participatory learning management or presenting problem situations to encourage learners to analyze and solve problems and lead to the creation of new

knowledge. It should also encourage the exchange of learning and work together as assigned to promote higher order learning and become a further learning community.

VI. CONCLUSION

According to a study on the development of learning management models that were consistent with digital learners to enhance life and work skills in the 21st century, the researcher concluded that the assessment of leadership and responsibility needs was an important skill for learning management that was consistent with digital learners. In this regard, it contributed to enhancing life and work skills in the 21st century. The results of the development and assessment of the appropriateness of the learning management model that was consistent with digital learners to enhance life and work skills in the 21st century were at the highest level. The assessment of the implementation of a learning management model that was consistent with digital learners to enhance life and work skills in the 21st century was at the highest level.

VII. RECOMMENDATIONS

A. *Research recommendations*

1. According to research findings on the development of learning management models that were consistent with digital learners to enhance life and work skills in the 21st century, it was found that there was a consistency and appropriateness. Therefore, the schools should continue to develop such teaching models for students.
2. The evaluation results of the development of learning management models that were consistent with digital learners to enhance life and work skills in the 21st century found that they were consistent and appropriate at the highest level. The implementation of the learning management model should include all elements in order to make the quality development of learners effective and achieve goals.

3. The results showed that the teachers should realize and focus on the development of student learning management models through continuous development of teaching models and encouraging students to apply the process in their daily lives.
4. Teachers should understand the principles and methods of teaching-learning models that are used in each teaching-learning activity in order to organize the activities effectively.
5. To use the developed teaching model, teachers should study the manual to fully understand the teaching in order to follow the systematic learning process. More importantly, they should build their own knowledge and understanding as well as being fluent in various online media, resulting in teaching and learning management to operate more efficiently.
6. To select the content other than those specified in the developed learning management model, teachers should select content suitable for learners or modify as appropriate but should be relevant to the course.
7. The learning activities should emphasize diversity and allow learners to practice in real or simulated situations as much as possible. Importantly, it should enhance students' experiences in practice such as searching for information and presenting various works so that students can summarize their knowledge and apply it in new situations.

B. Recommendation for further research

- 1) Research should be done to study the relationship between learning management models that are consistent with learners in the digital age to enhance skills for life and work skills in the 21st century and students' learning achievements.
- 2) Research should be conducted through the application of the hybrid learning approach

in various subjects appropriately, such as course content that allows learners to think, analyze, and synthesize for systematic planning of operations. This confirms the results of applying this teaching model to other subjects as well.

- 3) Research should be conducted on the effect of using the developed learning management model with other variables to improve learners' abilities and skills, including learning achievement.

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