Synthesis of Digital Leadership Components of Nurse Teachers
in Learning Management in an Era of Challenges

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Abstract

Digital has an important role in every professional field after the recent COVID-19 outbreak, so education has drastically changed in learning management that blended both on-site and online learning. Nursing education is a profession that emphasizes practice to develop professional skills. How can nurse teachers proactively manage technology integration to provide theoretical and practical learning. Accepting the use of digital is therefore a solution to the challenge of teachers in learning management. Teachers must change and develop themselves to have digital leadership. The purpose of this research was to synthesized the digital leadership of nurse teachers in learning management in an era of challenges. By synthesizing 10 documents and summarizing them into 3 components of digital leadership for nursing teachers as follows: 1) **Digital Citizenship: DC,** which has 3 indicators: Perceive and Apply Digital, Communication Digital and Ethics Digital 2) **Digital Professionalism: DP,** which has 3 indicators: Expert in Digital Skills, Nursing Digital Skills and Environment Digital Skills , and 3) **Digital Vision: DV**, which has 3 indicators: Motivation Digital, Team building Digital and Creative & Innovation Digital.

Keywords: Digital Leadership Components; Nurse Teachers; Learning Management; Era of Challenges

1. Introduction

Digital leadership is critical in the modern era of volatility, very high uncertainty, complexity and ambiguity. Humans must live with challenges all the time. Adapting and understanding change creating flexibility and agility digital leaders' decisions and actions must be systematic and able to adapt quickly to assess the situation and respond to unexpected changes. Digital has a role in every professional field after the recent outbreak of COVID-19, which has caused great changes in education in learning management that blended both on-site and online learning. Even after the outbreak, education still uses digital to organize learning anywhere, anytime, especially nursing professional education. This is a profession that emphasizes practice to create professional skills. How can nurse teachers proactively manage the integration of technology to provide both theoretical and practical learning? Accepting the use of digital is therefore a solution to the challenge of teachers in learning management. Teachers must change and develop themselves to have digital leadership, use digital or technology to design learning to create learning outcomes in modern higher education curriculum that focuses on learning outcomes (Outcome Based

Education) from a concept that emphasizes the importance of clarity in that focuses on education, backward teaching design, creates learning opportunities, constructive alignment and measurement of outcomes assessment and continuous improvement, that students develop knowledge, abilities, and attitudes according to the set goals. Emphasis is placed on flexibility in learning formats, measurement, and time. The important feature is designing learning for students by focusing on goals as the main focus. There is a shift from the old paradigm to the new paradigm. By focusing on students as important where the key to success is clarity of goals. Outcome-based education improves the quality of teaching and learning. Prepare every student to flexibility and freedom to learn in their own way. Help students achieve their desired goals, and help prepare students for future employment (Somchai Thepsaeng et al., 2023)

The course design OBE improves opportunities for students by following a student-centered learning approach, have a clear goal of making a positive impact on lives with a commitment to excellence and innovation. The curriculum is design in such a way that it emphasizes the outcomes, that will be achieved at the end. Teachers design activities and create innovations, that will help students achieve their desired goals. Teachers need to decide what skills are required for learning a particular subject. The curriculum is design with the learner in mind (McNeil, Hughes, Toohey & Dowton, 2006).

In developing the OBE curriculum, stakeholder needs are important. Because they are a graduate user place in the job market and are facing challenges in the digital world. Teacher producing institutions in Thailand must change the paradigm for producing and developing teachers to be in related with changes in digital technology. Modern Thai teachers must know and use digital technology to effectively learning management, and raise the quality of Thai education. Digital technology has made the world borderless, made students able to access information both in the classroom and outside the classroom. Developing digital literacy is a lifelong learning process. The specific skills required for digital literacy will vary depending on the learner's needs and circumstances. This may range from basic awareness and training to implementation. The implementation is more difficult and complex. Moreover, digital literacy isn't just about knowing about technology. but it also covers ethics, society, and reflection in work, learning, rest, and daily life. (Suwadi Uppinjai and Poonchai Yavirat, 2019). Jukes and Others (2010) also presented the characteristics of learners in the digital age and reflects the differences between learners in the digital age and teachers or educators in the digital age as follows: 1) Learners in the digital age are able to quickly access information from many media channels, but teachers or educators can access various media slowly and are quite limited in the channels through which they can access that information. 2) Learners in the digital age can learn or can work in many forms and have many dimensions at the same time, but teachers or educators still work with learners individually or in stages, and not multidimensional. 3) Learners in the digital age like to access or connect information that has many dimensions randomly. Teachers still let them learn or organize information to learn in a linear, uncomplicated way, and not multi-dimensional, logical and step-by-step. 4) Learners in the digital age tend to choose to study as much as they want to know, but teachers or educators

often teach what they should know 5) Learners in the digital age need praise, expressing satisfaction or reward quickly or immediately. but the most teachers or educators still give praise or rewards later or late.

A new educational paradigm and the development of Thai teachers in the digital age is a new educational concept in the 21st century that focuses on allowing students to learn about changes in the global context and to see the value of humanity as well as giving students the skills to think and solve problems creatively, able to adapt and work collaboratively with others with effective communication skills, and have the ability to manage and use digital technology as a learning tool in order to bring maximum benefit to the public. This causes teacher-producing institutions in Thailand to change the educational paradigm in producing and developing teachers in related with changes in digital technology, which is very important nowadays. Therefore, modern Thai teachers must have knowledge and ability to use digital technology to learning management. In order for learners in the digital age to learn effectively. and raise the quality of Thai education modern Thai teachers should develop themselves to be more digital, and at the same time, nurse teachers are people in the digital world, that must design and manage learning for learners in the digital age that responds to the needs of the digital society. Nurse teachers must accept, adjust and change, must rely on digital leadership. For modern learning management in an age of challenges, researcher in the role of nurse teacher who requires change and self-development in the digital field. Therefore, we give importance and interest in the digital leadership components of nurse teachers, by reviewed related literature. It was analyzed and summarized to serve as a guideline for nursing teachers' self-development, and will be studied to confirm the composition in the next order, from the literature review, there has not been any study of the digital leadership components of nurse teachers with specific characteristics of nurses.

2. Objectives

To synthesized the digital leadership components of nurse teachers in learning management in an era of challenges.

3. Literature Reviews

The researcher reviewed the literature on 10 subjects as follows:

Nawapatthana Gaman Game (2020)

Pichit Sananuea (2020)

Nursing Times [online] (2022)

Elina Laukka, Mira Hammarén, Tarja Pölkki, Outi Kanste (2022)

Monica Fletcher, Carol Read and Luciana D-Adderio (2023)

Lynn M. Nagle, Manal Kleib,

Karen Furlong (2020) Niels B. Lukassen,and et.al (2014)

Elina Laukka, Mira Hammarén, Tarja Pölkki, Outi Kanste (2022)

Natthaphon Pinthong, Yongyut Yaboonthong, Monnapat Manokan (2023)

Rattanan Rodthong and Monrak Lertwilai (2023)

4. Methodology

The researcher conducted the research by synthesized 10 documents (Documentary Research) and summarized them into digital leadership components of nurse teachers according to the following steps:

4.1 Step 1: Research and studied literature related to teacher characteristics in the digital age, and the role of nurses in the digital age from 10 literatures both of Thai and international papers.

4.2 Step 2: Analyzed the characteristics of teachers in the digital age and the role of nurses in the digital age, grouped into components of leadership in the digital age of nurse teachers in an era of challenges.

4.3 Step 3: Drafted a model for digital leadership components for nurse teachers in an era of challenges.

5. Results

5.1 Result of Synthesis of digital leadership components of nurse teachers in learning management in an era of challenges

From the synthesis of related documents by reviewing the literature related to teacher characteristics in the digital age, and the role of nurses in the digital age, from 10 literatures studied, it was found that there are 15 digital characteristics of nurse teachers in the challenging era. The frequency is between 2-4, accounting for 20-40 percent, as shown in **Table 1**;

Table 1 Review of literature related to teacher characteristics in the digital age and the role of nurses in the digital age

Teacher characteristics in the digital age	Nawapatthana Gaman Game (2020)	Pichit Sananuea (2020)	Nursing Times [online] (2022)	Etina Laukka, Mira Hammarén, Tarja Pölkki, Outi Kanste (2022)	Monica Fletcher, Carol Read and Luciana D-Adderio (2023)	Lynn M. Nagle, Manal Kleib, Karen Furlong (2020)	Niels B. Lukassen, and et.al (2014)	Etina Laukka, Mira Hammarén, Tarja Pölkki, Outi Kanste (2022)	Natthaphon Pinthong, Yongyut Yaboonthong, Monnapat Manokan (2023)	Rattanan Rodthong and Monrak Lertwilai(2023)	Frequency	percentage
1. Digital Training	✔	✔				_					2	20.00
2. Creative/Innovation	✔		✔		✔				✔		4	40.00
3. Ethics	✔									✔	2	20.00
4. Perceive	✔			✔							2	20.00
5. Review	✔	✔									2	20.00
6. Communication	✔						✔				2	20.00
7. Digital Citizen			✔	✔							2	20.00
8. Digital & technologies			✔			✔			✔		3	30.00

Teacher characteristics in the digital age	Nawapatthana Gaman Game (2020)	Pichit Sananuea (2020)	Nursing Times [online] (2022)	Etina Laukka, Mira Hammarén, Tarja Pölkki, Outi Kanste (2022)	Monica Fletcher, Carol Read and Luciana D-Adderio (2023)	Lynn M. Nagle, Manal Kleib, Karen Furlong (2020)	Niels B. Lukassen,and et.al (2014)	Etina Laukka, Mira Hammarén, Tarja Pölkki, Outi Kanste (2022)	Natthaphon Pinthong, Yongyut Yaboonthong, Monnapat Manokan (2023)	Rattanan Rodthong and Monrak Lertwilai(2023)	Frequency	percentage
9. Nursing Leadership			✔	✔							2	20.00
10. IT skills				✔					✔	✔	3	30.00
11. Transformation					✔					✔	2	20.00
12. Informatic						✔		✔			2	20.00
13. Motivation							✔	✔			2	20.00
14. Blended/Integrated Learning							✔			✔	2	20.00
15. Team building		✔								✔	2	20.00

5.2 Drafted a model for digital leadership components for nurse teachers in an era of challenges.

DLNT: Digital Leadership Nurse Teachers

DC: Digital Citizenship

DP: Digital Professionalism
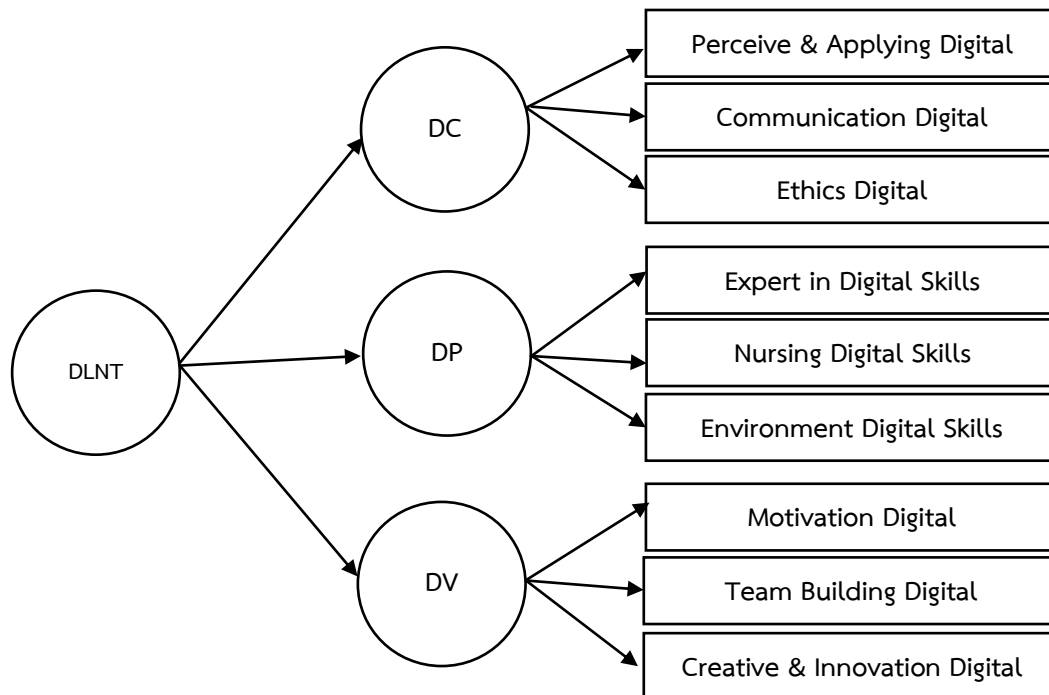
DV: Digital Vision

Figure 1: Drafted a model for digital leadership components for nurse teachers in an era of challenges

6. Discussion

The Components of digital leadership for nurse teachers, it was synthesized from a review of literatures related to teacher digital leadership, and the role of nurses in applying digital in nursing work has 3 components: Digital Citizenship, Digital Professionalism and Digital Vision. The results can be discussed that:

6.1 Digital Citizenship: The nurse teachers are citizens of a world that is living in a digital world, thus awareness and application in learning management for learners in Generation Z who are learners as grow and learn along with technological progress, as a result, this group of learners has the ability to learn including having the skills to search for information quickly (Phavika Phaksa & Niramon Chansuwan, 2022) In addition, communication using digital to enhance learning must be accurate and choose to use digital channels that are appropriate for learning activities in active Learning based on the ethical use of digital. The digital communication according to the 7 C's concept that Clear, Correct, Complete, Concrete, Concise, Coherent & Courteous. (Jobcan Thailand–Business Management Solutions, 2023)

6.2 Digital Professionalism: The Nurse teachers in the digital age might accept changes in technology, adapt, practice skills in using technology to become proficient, must be applying technology to manage learning in both theoretical and practical to be effective, including the use of digital in organizing a variety of learning environments to enhance active learning that is consistent with learning management in the OBE curriculum, such as evaluating learning progress using games as a base (Thidaratana Lertwittayakul, 2017), blended learning management to enhance learning outcomes in Professional Ethics and Law Course for nursing students (Thidaratana Lertwittayakul, 2019), creating and developing an online program for health care for the elderly (Thidaratana Lertwittayakul, 2019, Online active learning to develop analytical thinking skills in the subject of nursing administration for nursing students (Thidaratana Lertwittayakul, 2021), development of intelligent public health volunteers by using an online elderly health care program, Nong Yai Community Khon Kaen Municipality (Thidaratana Lertwittayakul, 2023).

6.3 Digital Vision: The nurse teachers must create learning goals, that create motivation digital for students in order to create team building to learning, and to achieve the highest learning outcomes of Bloom's taxonomy in the creativity and innovation level Phil Mark Newton, Ana Da Silva & Lee George Peters. (2020). This is the ultimate knowledge learning outcome of OBE.

7. Conclusions

The 3 components of digital leadership for nursing teachers as follows:

1) Digital Citizenship: DC, which has 3 indicators: Perceive and Apply Digital, Communication Digital and Ethics Digital

2) Digital Professionalism: DP, which has 3 indicators: Expert in Digital Skills, Nursing Digital Skills and Environment Digital Skills

3) Digital Vision: DV, which has 3 indicators: Motivation Digital, Team building Digital and Creative & Innovation Digital.

8. Research Limitation

The findings of the study represent the views of only part of the literatures review, within a short period of time. There are still limitations in the number of research articles.

9. Recommendations

This research should be to study in Confirmatory Factor Analysis (CFA) in the next steps.

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