

Educational Innovative Organization: Building High-Performance Educational Organizations to Develop Outstanding Quality of Education in case of Thailand

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Abstract

In the digital era, learners will be the focus of education at all levels that must be developed with quality following modern learning competency criteria. “Educational Innovation” is an innovation that arises from the concept of models, methods, processes or tools designed with creativity to be used in the educational field. There is a systematic trial and test of performance. It eventually became a recognized innovation and could be applied to developing a quality education system. By creating an educational organization as an educational innovative organization, administrators play a key role in defining and directing the organization’s direction to achieve its goals, which must be a person with professional transformational leadership. Have a vision that is ready for change. It has a flexible organizational structure to exchange and learn freely. It was developing lecturers and educational personnel to be knowledgeable and capable of successfully innovating to become educational innovators. Therefore, corporate executives with innovative leadership. The academy has an atmosphere conducive to innovation, and teachers and staff have a habit of innovation, resulting in the academy becoming an educational innovative organization capable of continuously innovating in education: competitiveness and value-added for educational agencies aimed at internationalization.

Keywords: Educational Innovative Organization, High-Performance, Quality of Education.

Introduction

The rapid change in the 21st century from industrial capitalism to transnational industrial capitalism with higher-level technology and management development. Emphasis on producing automatic high-tech products and services that use computers and modern technology. This era requires labour and organization with knowledge and innovation. Workers must have new knowledge and skills that must adapt to quickly learn new jobs, including making decisions like experts. Those who will live with quality and be happy must be adapted for living (Edwards-Schachter, 2018). Children and youth are considered an important force in the nation. Therefore, the learning process, content knowledge, skill development and rationality will be important variables for the learner. In many countries, the importance and the need for young people to have skills for living in the 21st century has changed from the original (Brunetti et al., 2020). Especially in the era of learning and digital transformation, it is necessary to join forces closely between those responsible for education and stakeholders to formulate policies and procedures for learners to have desirable skills or characteristics according to this new learning framework (Phakamach, 2023).

Digital Education must be adapted to be proactive and use the principle of learning as a center. This is because the progress of technology and knowledge transition is fast, continuous and endless. Both learners and teachers must develop themselves into a new learning world. Learner behavior has changed. Adjusting the teaching process and applying modern media to stimulate learners' learning is a challenge because a new learning society aims to allow learners to be aware and create innovations, which is an important turning point to entering the Education 4.0. Society needs a new generation with critical thinking, a positive, creative imagination, knows how to learn and share knowledge, understand the direction of the world and society, can communicate with others confidently, live a responsible life, have virtue, and not take advantage of others in Thai society and the world society. Therefore, learning will change to advanced learning skills. The instructor is considered a coach and a facilitator in the teaching process and adjusts the teaching method so that learners can learn more by continuously using educational innovation throughout the system to comply with the changes (Inoue & Light, 2022).

In the Digital Economy, the world's trade, service and education model has changed a lot; that is, the importance of products used resource-based, and products produced labor-intensive tend to decrease. While the products used are science-based, which requires research and development and designing with creative ideas, they tend to increase continuously. Meanwhile, when considering the proportion of investment and spending on research and development with Gross National Product (GDP), the role and importance of the innovation development process that makes entrepreneurship successful through innovation, promoting innovation culture and building innovative systems and organizations (Serdyukov, 2017; Chandra et al., 2021). In order to strengthen the country's competitive advantage, education and personnel development must be aware and aware of the current changes in the global society. As well as finding new knowledge with the application of modern technology in life for benefits and work efficiency, including the development of the country to be consistent and in the direction of the 20-year national strategy framework, which is a matter that must be done seriously (Phakamach et al., 2021b).

Thailand has been reforming education for more than 20 years, continuing until the fourth round of reform in the year A.D. 2019 under the National Education Act (No. 4) A.D. 2019 that focuses on changing the new four, namely the development of the quality of modern Thai people, new teachers, new schools and learning resources, new management systems, while still focusing on decentralizing the power of all parties to participate in educational management. Management is transferred from central to administration at the

educational and local levels (Sinlarat, 2020). However, in the current reality, it is found that most educational institution management models still have traditional management, such as Fayol's management theory concept, that still has a hierarchy of management structure. The management of the educational institution has the highest power. Both in decision-making power, planning, coordination, and control, including the division of work that leads to the commitment to work of their side rather than joining forces for the success of the whole organization. In addition, the development of personnel in the organization or the development of instructors in educational institutions also focuses on the development of knowledge and ability to meet the indicators from the country's central policy rather than development according to the needs of teachers. Education reform, therefore, does not see any concrete results (Phakamach et al., 2021a).

Therefore, the educational organization will survive such rapid world changes. Most of them will depend on creativity. Discovering new things and creating innovations from the traditional organization that focuses on command from top to bottom. The supervisor is in charge of all orders and planning work. Must change the nature of the organization to be an Innovative Educational Organization that requires the development of an educational management model, new management, the application of technology and educational innovation. Including creating innovation habits to happen to people in the organization, teachers, and educational personnel in educational institutions must have the initiative. Can create new work patterns, teaching and learning media and always use new teaching methods. For the development of educational institutions following the conditions of the digital education society (Riccomini et al., 2021; Phakamach et al., 2021a), educational institutions should be responsible for creating innovation and creative networks within the institution that are based on the mutual learning of teachers and educators to bring the work from that learning to make academic benefits and modern educational innovation and published to Innovator of other educational institutions and related groups interested in developing modern education systems to strengthen the education system of Thailand and expand the scope of knowledge to go further internationally (Aboobaker & KA, 2021; Phakamach, 2023).

This article aims to demonstrate the importance of ideas and theories of innovation, organization of innovation, and educational innovation. The importance of educational innovation, types of educational innovation, the process of creating and developing educational innovation, dissemination of educational innovation, forms of educational innovation, the form of being an organization of educational innovation, changing the traditional organizational paradigm to an organization of educational innovation that consists of innovative leadership, creating an innovation atmosphere, and creating innovation habits in teachers and educational personnel. Including the mechanism and process of modern education management that can lead educational institutions to be successful educational innovative organizations. This has shown the concepts, forms, methods and innovative processes appropriate and sufficient for the organization of educational innovation. This has shown the concepts, forms, methods and innovative processes that are appropriate and sufficient for aiming for the organization of educational innovation. Can use information in education, design, development and create new knowledge for creating educational organizations for quality and efficiency in line with the development of human resources according to the 20-year national strategy A.D. 2018-2037 and the National Education Plan A.D. 2017-2036 for the development of Thailand's human resources to the international level.

Concept and Theory of Innovation

1. Innovation

Innovation stems from “Innovare” in Latin, meaning to do something new. Applying new concepts or taking advantage of what already exists in a new way to make economic benefits, or is “doing what is different from others by using various changes that occur around us to become an opportunity and transfer to a new concept that benefits yourself and society.” This concept was developed in the early 21st century, focusing on creating scientific research and technology that will lead to the acquisition of innovative technology (Drucker, 2015).

Drucker (2015) said that the current and future ideas about innovation have influenced and played a great role in humans and society. Many ideas about innovation believe that innovation is a thought phenomenon that aims to create something new for economic driving or is considered a strategy of the organization that wants. Create a competitive advantage by producing new products to create interest from customers. However, the definition of innovation is not just creating new things. Innovation has a broader meaning. In addition, the organization’s context must be considered because the development of strategies is based on innovation. Must understand the context of the organization, including the culture of the organization that is Both primary and secondary competencies that the organization is or wants to be, including human resource development activities that are in the organization because the development of innovation in the organization must come from the development of innovation for personnel first Therefore can be able to develop sustainably in the organization.

Phakamach, Phomdee, and Wachirawongpaisarn (2021b) have given the meaning of innovation to bring new ideas, new practices, or new inventions, or maybe improve traditional things to be better and suitable for the situation. These have been tested and developed step by step and systematically until they can be trusted that they give better results to improve educational practices. As a result, higher educational efficiency. Observations of what is considered innovative will have basic characteristics, including 1) a whole new idea and action process or improvement from what has been better; 2) Thoughts or actions are proven by experiments, research, and research performance achievement is higher; 3) The system method is used by considering all three components: process information and results; and 4) is not part of any part of the current work system. The main part in determining what is innovative or does not have criteria for consideration, including 1) must be all new or partial, 2) The systematization method is used by considering the elements of the imported data, the process and the results to be appropriate before making changes, 3) It is proven by research or in the process that it will help some operations to be more efficient, and 4) it is not part of the current work system. It is not considered an innovation if it becomes part of the current work system.

2. Innovative Organization

Innovative Organization: IO is a modern organization management concept or Organizational Renewal (Szabo & Csontos, 2016) to change the characteristics or behavior of the organization. By creating innovation with a system that focuses on potential or differences to be extended or create a new business and flexible in management Decentralized, there is a team-team atmosphere by giving everyone in the organization to express opinions. Moreover, bring knowledge from various sciences to create and improve new management methods and develop new products and service forms. It also provides opportunities for all parties involved to express their opinions together in making decisions and focus on knowledge as an important resource for innovation by accessing knowledge creatively. The results of linking human resources, financial capital and infrastructure,

including research and development, to create an “innovative ecosystem”. The most important thing of the organization that needs to be improved is to invest in people and create innovative leadership with vision and innovative behavior to have high self-driving (Karani et al., 2023; Phakamach et al., 2023a). Enthusiasm to learn to invent innovations, have dreams, and not fear failure. It must also be a supporter for the organization to have an innovative climate by encouraging members to be free to create creativity (Sousa & Rocha, 2019). Creating routine work-based innovation, including knowledge management in the organization to develop new knowledge. Can access knowledge quickly and share knowledge (Saengkaew et al., 2021; Benoliel & Schechter, 2023).

Phakamach, Phomdee, and Wachirawongpaisarn (2021b) said that the elements of building an innovative organization can be divided into ten elements: 1) having a common vision, leadership, and aiming for innovation, 2) an appropriate organizational structure, 3) the core personnel of the organization resulting from the design of human resources, 4) an effective team, 5) flexible and continuous human development training and development, 6) communication expansion, 7) high participation in innovation, 8) external factors such as threats and opportunities, 9) an atmosphere that promotes creativity, and 10) a learning organization. The elements of creating an innovative organization are very related. It is also complicated to apply. Therefore, it is necessary to sequence the implementation process into a system to help various organizations understand the success of creating an innovative organization. In addition, there must be an integration of information or knowledge. From the outside to help develop the organization to create innovation that can effectively meet customers’ needs. Therefore, will eventually be an innovation organization (Phakamach et al., 2023b).

In conclusion, the organization of innovation means an organization that has improved and changed the thought process to create something new that is different and useful. Alternatively, it is an organization that has applied new changes until it is successful and spread until it becomes a methodology for the general public. In addition, when considering the organization that will be successful in the future must be an organization that can make personnel in the organization have a commitment and responsibility for the organization, encourage personnel to create innovation and allow all employees to participate in learning and understanding systematically by setting clear objectives, goals and strategies under the structure of the flexible organization (Aan Komariah et al., 2018; Aboobaker & KA, 2021).

Educational Innovation

The emergence and development of educational innovation are spread around the world. Each model or strategy is adjusted to suit the knowledge and skills of students (Pisanu, 2014). In order to achieve success in education in the desired format, there will be continuous economic and technological development. These educational innovations will replace traditional education (Aboobaker & KA, 2021). Today, learners want benefits and receive real educational services. Educational institutions must adapt to become a recognized place. This can make those who come to study a variety of knowledge and techniques, and all learners must feel special to have the opportunity to study. Aiming to be successful in this new educational system This is the driving force for educational institutions to adapt with more responsibility. There is modern information. It is, moreover, implementing innovative digital communication technology (Saengkaew et al., 2021; Phakamach et al., 2022a).

In general, it can be defined that Educational Innovation is caused by using knowledge in various fields. To invent new things to happen for social and economic

benefits. In the author's view, it can be concluded that Educational Innovation means innovations caused by concepts, methods, processes or tools designed with creative ideas to be used in the education industry. There is a systematic trial and performance test. Finally, it became an innovation that has been accepted and can be applied to the development of the education system to continue quality.

The Importance of Educational Innovation

Innovation is important to many studies. Because in the globalization world of education 4.0, there are rapid changes in all aspects. Therefore, it is necessary to study educational innovations that will be used to solve educational problems in some areas, such as the Coronavirus outbreak problem. Modern curriculum development Production and development of new media to meet more human learning in a shorter time The use of innovation in the educational management system also helps use learning resources effectively and self-learning. This also includes the development of online teaching and learning management innovation (Inoue & Light, 2022). In summary, educational innovation occurs according to the following new causes: 1) Increasing the number of learners, especially free education, is fast; 2) The change of technology in all aspects is fast; 3) Learner's learning is more likely to self-learning; and 4) The progress of the ICT system pushes the development and use of educational innovation.

Inoue and Light (2022) also stated that the use of educational innovation in teaching and learning, in addition to helping learners to develop learning as specified, there are also has the following benefits: (1) Learners learn faster and more, (2) Learners understand the lessons concretely, (3) Interesting lessons and create a fun learning atmosphere, (4) Reduce teaching time and increase the learning time of learners, (5) Increase efficiency and quality in teaching management, and (6) Save costs.

From the importance of educational innovations mentioned above, it can be found that educational innovation is important to solve problems or develop learners. It is also a creation of new media and teaching methods teachers use to develop learners by focusing on differences between people—emphasis on the ability to learn the learner. Educational innovation will allow learners to access more lessons or content. This can develop learners' knowledge, skills, characteristics and attitudes to have learning results according to standards learning outcomes or competencies that the course determines (Wilson & Sy, 2021).

Types of Educational Innovation

The past topic has mentioned the importance of educational innovation. However, there are also related issues about the type of educational innovation. Can classify the type of educational innovation according to the scope of educational management with five important elements, as shown in Figure 1.

1) Curriculum innovation is a new method of curriculum development following the local environment. Moreover, it meets the need to teach more people Because the curriculum must be constantly changed to comply with the country's technological progress, economy, society and the world. Examples of curriculum innovations include integrated curriculum development, individual courses, activities and experiences courses, intensive courses, local courses, alternative education courses, etc.

2) Instructional innovation is a systematic method to improve and invent new methods to meet individual learning, learner-centered teaching, participatory learning, and problem-solving learning. Developing teaching methods requires new methods and

technologies to manage and support teaching and learning—for example, cooperative teaching, discussion teaching, research teaching and learning with online platforms, etc.

3) Courseware innovation uses various technologies to produce new teaching materials: self-study, Group study, and mass learning. As well as the media used to support training through the internet network and educational cyber businesses such as computer-assisted teaching, lessons interactive e-books, online lessons, interactive video sheets, multidimensional media, group work guides, educational platforms, learning support applications and AR/VR, etc. (Phakamach et al., 2022b).

4) Evaluation innovation is an innovation that is used as a tool for effective measurement and evaluation and quickly. Including educational research and institutional research. The application of computer programs to support the measurement and evaluation of educational institutions, such as creating various measurements, creating measuring tools and evaluating the quality of education in all dimensions, and application of computer programs for educational resource management, etc. As for the guidelines for creating a measurement and evaluation, such as creating a teacher and learner competency, developing the exam warehouse, and creating a self-discipline model, etc.

5) Management innovation is the use of innovations related to the use of ICT systems to help manage to have the desired format and meet the objectives of education management at each level appropriately, both quantitative and qualitative, for the decision of executives to be fast to keep up with the world change. Most of the educational innovations used in management are related to the database management system in the agency, including the development of management quality to be systematic, such as systematic management, strategic management, educational quality assurance integrated management, etc.

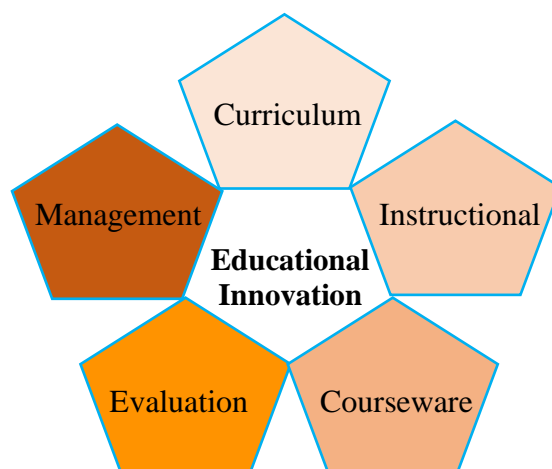


Figure 1. Educational Innovation

From the type of educational innovation mentioned can conclude that educational innovation can be classified into two large types: 1) Concrete innovations such as learning sets, teaching sets, game sets, skills training lessons, teaching and tales, and 2) Abstract innovations such as techniques, teaching methods, various forms of learning management and role-playing, etc. The selection of innovation to be used in classroom research. Instructors should choose an innovation suitable for the behavioral context to solve the problem by using single or mixed innovations, depending on the ability to organize the instructor's activities and the educational context of each level of learners (Schildkamp et al., 2020).

In addition, when considering the perspective of the Educational Innovator, it was found that educational organizations can produce a variety of innovations, which may be

classified into three main characteristics, including 1) Product Innovation, which may mean the development of media, materials and modern teaching equipment, and 2) Process Innovation, which may mean the process of providing academic services, organizing various forms of learning processes for learners, communities and those involved, etc. Moreover, important for school administrators is 3) Administrative Innovation, in which leaders in educational organizations must invent methods and new education management guidelines to increase efficiency and effectiveness in the organization's overall operation to have different characteristics. Service recipients and stakeholders, in general, accept it. This administrative innovation has become an early variable or the most important mechanism to drive other innovations in educational organizations to be more capable of achieving goals (Phakamach et al., 2021a).

Most educational innovations occur in countries with great prosperity, such as the United States and many European countries. For Thai education, foreign innovation is always used. They learned theory innovations and concepts in teaching and learning management using ICT systems. At the same time, Thai educators have developed Thai teaching and learning innovations, which have both theoretical and important educational concepts, including teaching and learning innovations with learning psychology or educational concepts of foreign countries as a basis. Educational innovation has developed in Thailand since A.D. 1970 to the present by Thai people.

Moreover, we can proudly say that Thai education innovation has many characteristics and comes periodically. Educational innovation that occurs at any time is an innovation in that time. When the period passes, the newness of that thing is gone. However, the benefits and pride were widely applied or applications at that time or used for example.

1) KHIT-PEN is a theoretical innovation Dr.Kowit Worapipat came up with and presented at a meeting in New Delhi, India, when A.D. 1970. The concept of thinking is focused on the thinking process that a person will make himself. Society and the environment are harmonious smoothly to achieve happiness, which is the peak of human desire.

2) PLEARN is an innovation in the principles and concepts of teaching and learning courses. Dr. Chaianan Samutvanich has presented “PLEARN”, meaning from the word Play + Learn is to learn + play or learn to play. PLEARN is a concept in both the course and the teaching process that allows students to play what they are studying and enjoy learning.

In the year A.D. 2020, The Ministry of Education has seen the need to create educational innovation by defining the educational innovation area (Education Sandbox) means the educational area that has been announced as a space for educational innovation experiments. By empowering educational institutions to manage freely and manage education by the context and needs of the community to develop the quality of education and can develop learners to have quality according to the specified goals. Central agencies provide appropriate support in both resources and support mechanisms for schools in the area through community participation and those involved in the management of the study of the area. The new educational management model has 4 goals: (1) increase achievement by increasing students’ learning achievement in all three areas (ethics, skills, knowledge) and expanding to the national level; (2) Producing/developing innovation by developing provincial education management innovation and expanding educational innovation to the national and other areas; (3) Reducing inequality by reducing educational quality inequality by raising the learning results of weak and poor students; and (4) merging the network by collaborating with network partners in educational management Development and expanding educational innovations to cover the country.

The Process of Creating and Developing Educational Innovation

When knowing the type of educational innovation from the past topic, it is necessary to mention the process of creating and developing it, which is the principle that will be used to create quality educational innovation. The basic steps of creating innovation for teachers consist of 7 steps: 1) Analyze the problem condition in the class; 2) Determine the innovation to be used to solve the problem; 3) Study documents related to innovation; 4) Create innovation according to academic principles; 5) Check the quality of innovation; 6) Experiment with innovation; and 7) Report on innovation trial results (Pisanu, 2014). Therefore, those who are involved in educational management should proceed to create innovation according to this stage. For the innovation created to be quality and can solve the problem of learners.

From the review of ideas and literature related to educational innovation in all dimensions in the view of the author can summarize the process of creating and developing educational innovations to be effective quality. And can be used to create and develop consisting of 6 standard steps, shown as shown in Figure 2 with the following related details (Phakamach et al., 2021a)

Step 1: Determining is studying problem conditions, needs, detailed analysis and causes of problems that need solving or developing trends. Set goals and important issues to solve problems or develop desirable characteristics of learners. That is, determine the purpose of learning that wants to be born in the learner, which may be specified in the whole room, small group or individual.

Step 2: Identifying is a process of academic research and researching theoretical concepts and research results related to developing learners' characteristics. Combined with their knowledge, ideas and experiences, and as a conceptual framework of the learning process consists of teaching materials or various equipment materials, techniques, methods and processes, etc., that are thought to be the most suitable to solve problems or develop learners as needed.

Step 3: Creation and Development is a process to study how to create that innovation in detail. What are the characteristics? How to proceed? Who are the stakeholders? Is there a preliminary quality inspection? How to assess the efficiency during the creation and development? And then prepare the innovation to complete according to the requirements using the research and development process (R&D).

Step 4: Experimentation and Improvement is the process of experimenting with those educational innovations with small groups of learners first to improve the complete solution before being used. In addition, some educational innovations, such as ready-made lessons and teaching kits, will be a form of trial before 1 person. When a defect is found, it is improved. After that, experiment with a group of about 9-10 learners, which consists of weak, medium and good learners and check the quality. By finding the efficiency or effectiveness of educational innovation, etc. After that, it may be improved again before applying to a large group of learners in real conditions.

Step 5: Implementation is a process to improve until ensuring the quality of educational innovation and then actually used. Which may be used according to the normal teaching plan or can be prepared as a form of innovation trial according to the experimental research process depending on the wishes of the instructor or educational researchers and the actual situation of teaching management that occurs, including collecting data periodically.

Step 6: Evaluation is a data collection process that shows the results of using educational innovations with various techniques, representing the quality of educational innovation. If the results of educational innovations can reduce the problem or solve

problems or develop learners as specified, it can be written in the form of research and development, expanding and disseminating educational innovations.

However, to create and develop educational innovations with good quality and performance, it should be reviewed back to Step 2 again when the development has ended. This is to check the results of innovation research and development that is very high quality and efficient. Moreover, it may include identifying issues in the development of educational innovation in the next round.

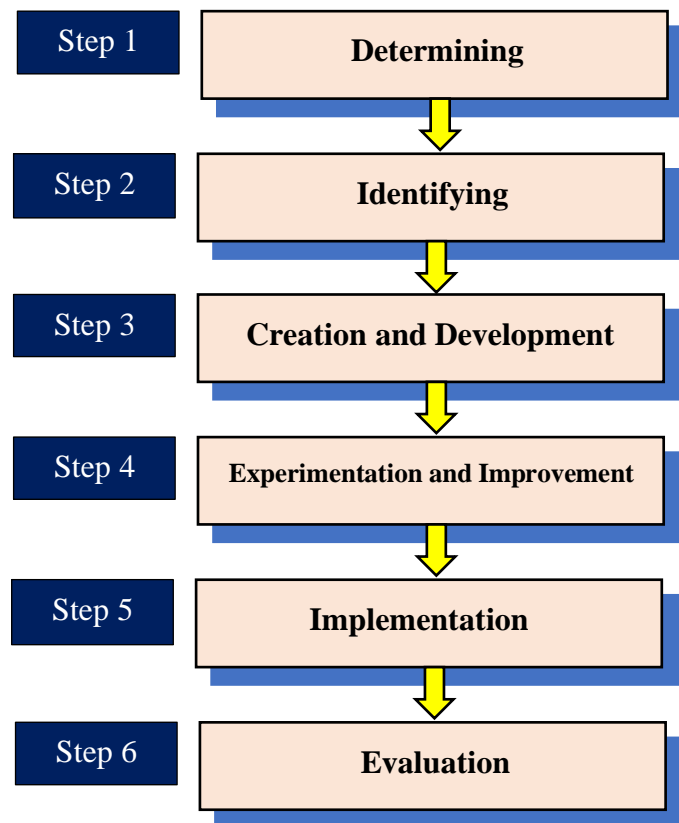


Figure 2. The Process of Creating and Developing Educational Innovation

Educational Innovation Dissemination

Education about educational innovation and innovation diffusion has received widespread attention in the education industry. Especially on the development and creation of educational innovations, whether it is a course innovation such as local courses, Module courses, e-learning courses, online courses, etc. Innovation in teaching methods, such as teaching that focuses on learners, is important, Integrated teaching and community-oriented teaching as a classroom, etc. Innovative teaching materials such as interactive digital platforms, AR/VR, etc. Measurement and evaluation innovations such as using smart cards for systematic use of services, etc. Management innovations include ICT systems for executives and electronic office management systems for educational management, etc. (Phakamach et al., 2021a).

Dissemination or Diffusion is the process that makes innovation accepted and used by community members according to the goal. Therefore, dissemination is a process in which innovation will be conveyed through communication channels for a certain period with members of a social system to achieve adoption. From the analysis of the nature of the publication, it was found that five related things influence the operation of the dissemination

process, including (1) the innovation itself, (2) information or information used to communicate in the matter of that innovation, (3) time conditions, (4) the nature of the social system or community that innovation will be published, and (5) acceptance. Innovation dissemination research will study how these five factors affect and interact to promote the acceptance and use of the productivity of innovators, including technology and educational communication (Saengkaew et al., 2021).

Dissemination of educational innovations is a process that will lead to accepting that innovation. Because it leads to changes in organizations or institutions, which will result in the relevant population deciding to accept or reject, it is a combination of many activities from stable and long-lasting activities. Activities that are not stable and continue for a short period. There are constantly changing many consecutive activities. The method of disseminating educational innovations can be divided into six steps (Phakamach et al., 2021a; Chandra et al., 2021).

1) *Injection*: Is the process of bringing new ideas or methods to recommend members of an organization or educational institution.

2) *Examination*: The presented concept or new method has received members' attention in that educational institution. There is a research plan. As well as the formation of a committee to consider.

3) *Preparation*: Those involved in educational institutions decided to experiment with that educational innovation, and this led to the preparation of gathering personnel and resources until the training before using the educational innovation that has developed.

4) *Sampling*: There is an experiment to use the innovation for the first time. Then, sample some users to provide information for education by considering the results of past use.

5) *Spread*: Is a distribution or expansion of educational innovations that have been tried and good results to the target population Especially the reliable group that has sufficient potential to use that educational innovation.

6) *Institutionalization*: Educational innovation has been accepted and used in operation until it becomes a widespread practice, which is the normal practice by all members.

Model of Educational Innovation

1. Programmed Lesson: Programmed Lesson means organizing a teaching system that allows students to engage in self-study activities according to the content arranged in steps. Learners have the opportunity to evaluate self-study by always looking at the reflection. In addition, learners will choose to study according to their interests and step according to each person's ability. The principles of the program lesson are as follows: (1) Active Participation to promote more learning; (2) Immediate Feedback is to provide feedback to learners immediately that what the learner did is right or wrong; (3) Success Experience when completing each important step, the teacher should reinforce learners because it will encourage students to feel proud. Moreover, want to continue studying; and (4) Gradual Approximation is a sequence of the content steps to suit the ability (Konst (e. Penttilä) & Kairisto-Mertanen, 2020).

The nature of the programmed Lesson is (1) divided into sub-sections called "frames". Each frame has explanations and questions for learners to continuously answer and sort the content. The results will be known immediately when the learner finishes answering in each frame. The study will proceed step by step. There is a framework for reviewing and testing for learners to understand more and (2) unlimited learning time. Learners can learn according to their abilities. In addition, the program lessons must be

clearly placed. Identify observable actions that can be measured accurately. Moreover, before using, one must pass the trial and edit the problem until the efficiency of the criteria set and the program lesson gradually increase the learning experience in the order the creator has set, such as Game-Based Learning.

2. Teaching Management through the Internet Platform: The Internet is an openness of opportunities to educate and create equality for everyone who can access the network. The Internet is a collection of knowledge, also known as a “treasure of knowledge”. Education in the Internet age is learning to distinguish and filter information to compile and organize information into knowledge. Currently, the research tries to create an automated process of searching for information. (Internet network or digital platform) Moreover, compiled into knowledge according to the rules that users can identify. This new science is called “Knowledge Engineering”, which has a World Wide Web service. It is a method developed for user convenience based on much higher performance. Which has two important strengths: 1) Can link and call relevant information to appear by the method called “Hyperlink” and 2) Can manage many forms of information, whether text, still images, sound, animation video, etc.

3. E-Learning: E-Learning or Electronic Learning means “Learning through electronic media, which is used to present computer content in the form of multimedia media, including electronic messages, still images, graphics, videos, animations and 3D images, etc.”. It has another meaning that E-learning means education learned through the Internet network by self-learning. Learning will be based on two factors under the theory of learning: 1) Learning according to the knowledge of the ability of the learner himself and the response in the difference between individuals, and 2) Learning will be done through the media on the Internet network. The instructor will present knowledge information to learners through the website or digital platform, which may have interaction (conversation, interaction and sending news) between each other. There will be three forms of learning: the instructor with the learner, the learner with another learner or one with a group of learners. This interaction can be done through two tools: 1) Real-time, including conversation in the form of printing messages, exchanging news or sending in the form of sound from the service of Chat Room and 2) Non-real-time, including sending messages via Electronic Mail, Web Board, Digital Platform and News-Group services, etc.

4. Distance Education: Distance Education means the education system in that learners and teachers are far away from each other. However, it can cause learning by using teaching materials in the form of mixed media is the use of various media together, such as textbooks, charts, and computers or by using telecommunications equipment and digital radio and television media to help spread education to those who wish to learn widely throughout the local area. This study is available at both beginner and advanced degrees.

Distance education is one of the ways to study both in the system and outside the school system that relies on print media, electronic media and personal media. Including various forms of telecommunications systems as teaching principles for learners to learn by themselves from those media and may have additional teaching for learners to ask questions from teachers or additional teachers. This study may be in independent education, individual education, or an open university.

5. Instructional Package: Instructional Package is a mixed medium with a specific purpose to teach, perhaps a relatively new story for some people. The instructional Package is a mixed media obtained from the production system and brings teaching materials consistent with the subject unit and objectives to help change the study behavior effectively. The type of teaching set has four large types, including (1). Lecture Module, (2) Activities Module, (3) Individual Module, and (4) Distance Module.

6. Learning Center: Learning Center is a learning experience that allows learners to engage in the most self-learning activities by using mixed teaching materials and the principles of the group relationship process to help in teaching and learning. It is also a unity study. This will provide an opportunity for learners (1) to participate in active learning, (2) to check the results of self-learning immediately, (3) to have experience, causing pride in success, and (4) to generate knowledge gradually in hierarchical order.

Learning Center is classified as an innovative learning environment that will encourage learners to practice the pursuit of knowledge by themselves. Know the decision Responsible and can work together as a group. The form of the learning center can be divided into many forms, but four types are found, including (1) Independent Learning Center, (2) Classroom Learning Center, (3) Teaching as a Learning Center, and (4) Community Learning Center (CLC).

Educational Innovative Organization

Phakamach et al. (2021a) and Kuril, Maun, and Chand (2023) have given that an Educational Innovative Organization means an organization or educational institution with a new action, new creation or development adapted from anything, making education or teaching activities more effective than ever, causing learners to learn to change in learning, rapid learning occurs, and being motivated to study, resulting in maximum efficiency and effectiveness with learners. Therefore, as an organization of educational innovation, educational institutions must be able to invent new things for development from the work process. Moreover, production is Both in the management model, preparation of the course, creating media or teaching and learning management methods, including measurement and evaluation to promote learning of learners according to potential and have a competency ready to study and continue to work effectively.

1. Model of Being an Educational Innovative Organization

The literature review and related research documents found that there is a study of factors and the model of being an innovative organization. However, the study a model of being an Educational Innovative Organization is still relatively small. Especially in Thailand, therefore, the author has brought the study of a model of being an Educational Innovative Organization that has been proven and accepted academically to present by linking to the context of educational organizations at all levels of Thailand and around the world (Rehman & Iqbal, 2020; Wilson & Sy, 2021; Ayduğ & Ağaoğlu, 2023). Which found that factors affecting the Educational Innovative Organization must consist of the main components, including innovative leadership, innovative climate, and innovative behavior.

1) Innovative Leadership

The important role of the highest management in driving the organization that will move to be an organization of educational innovation. Can summarize the characteristics of the organization of educational innovation management on the issue of having innovative leadership as follows (Phakamach et al., 2023a):

(1) Executives in the organization have a vision to change the organization's management to the goal. Ready to support the management to an innovative organization. Pay attention to the correct thinking process in management and continuously develop to compete in the future. Moreover, it supports research for development.

(2) Executives in the organization are ready to listen to opinions. Be a good example for personnel. Support the development of knowledge and skills of personnel that are consistent with the goals. Pay attention to mobilizing talented people within the organization. Understand the art of managing a team with knowledge and talented people to

be the most effective. Understand the role of related technologies and support the use of technology appropriately.

(3) Executives in the organization pay attention to the development of procedures. Create a transparent work process. Participate and decentralize management, create a listening and accessible atmosphere, communicate clear information can manage amid cultural diversity.

As for the important role of human resources executives of educational organizations that will move to Educational Innovative Organization to be successful, it can summarize important issues such as (1) Human resource executives must work together with educational organization executives and our business partners, (2) Is an educational change, and risk manager can work under pressure and with others, (3) Strategic Human Resources Agency Executives Support the use of technology to operate effectively, including being an agency to develop knowledge, ability, and personnel in educational organizations to be equivalent to international, and (4) Human Resources executives who are sponsors and coordinate to be consistent throughout the organization. They are developing and maintaining good people within the organization and developing human resources workers to perform professional work.

2) *Innovative Climate*

It can be said that the management of the educational institution has many roles depending on the mission and administrative activities. Education administration in the 4.0 era must be consistent with the change of global society, especially society and the atmosphere of learning in the era of technology, to connect various information from all regions of the world. Executives must fully implement high-level management strategies and techniques to lead the organization to success (Keinänen & Kairisto-Mertanen, 2019). Therefore, the development of educational institutions, the educational environment, and the right environment for learning are always important and urgent. Management should be aware of the decision to implement the institution's mission in which it is responsible for creating quality for the future seriously and urgently. (Kolomiets & Litvinova, 2019) However, the basic problems for the executives of the Thailand 4.0 educational institution related to the organization of educational innovation include (1) How to manage the school for all students to have the highest potential and be completely human according to the skills of Thailand 4.0, (2) How to make students consider learning a lifelong activity, and (3) How to make educational institutions meet cultural diversity and human equality?

From the analysis of Thai education management guidelines to drive to the Thailand 4.0 era, focusing on the analysis of the policy and creating an innovative climate, it was found that

(1) Creative development in the teaching and learning process to develop innovation. The goal of the Thailand 4.0 era is to have creative skills, which can be developed at school age to be a skill for future careers. The goal is to produce graduates to have the ability to create works that can be used in the development of new knowledge and technologies to increase higher competitiveness and will be the starting point of leading to the application of knowledge and technology and building relationships with other related parts.

(2) Professional development of educational personnel because teachers are important in supporting education. The instructor must be good, expert and ready to develop education. In order to develop teachers to be ready to manage education, The instructor must have professional knowledge and teaching ability. There are professional standards to create truly quality graduates.

(3) Promotion and development of digital technology systems for education to increase the ability to manage teaching and learning effectively by having to be consistent with the era and meet the needs of the labour market.

(4) Creating cooperation in innovative research and development to develop new knowledge and focus on entering a career. The development of knowledge by participation will be consistent with the needs of the labour market and truly reach the needs of the social sector and can be used.

3) *Innovative Behavior*

The last important thing being an Educational Innovative Organization is “Innovative Behavior” from the analysis of information related to the Innovative Organization. It was found that the personnel characteristics of educational organizations that can be “Educational Innovators” should have the following habits (Da’as et al., 2020; Aboobaker & KA, 2021).

(1) Have professional leadership, focus on planning, and have a conscience and ethics in achieving goals.

(2) Have creative initiatives, think positively, think, know well, write well and speak well, intend to perform the best duties and responsibilities, constantly practice additional knowledge, can use at least 3 languages, have excellent computer performance, and specialize in technology and innovation.

(3) Can work with others effectively. Work as a team by acting as a leader and follower in the team according to the expertise and suitability of work and create results according to standards.

(4) Be equipped with both primary and secondary skills. Works multi-function. Ready to accept changes at any time. Understand and know their business well and understand the impact of globalization on business Have all-around knowledge and adapt to the change.

(5) Can use technology widely suitable for the job.

The important tips to be a good educational innovator from an innovative perspective are: know yourself, draw a dream clearly, know how it differs from others, how to make a difference, and What is used as a difference. Find knowledge and network, Find ideas and capital systems. Finally, it is time to test your mind with those who know. Suppose it is in the criteria that is enough to proceed immediately. In addition, there must be an understanding of the science of successful innovation management. Which must have a strategic plan based on three principles, including academic principles and practices. As for learning management to create innovation, you can summaries the steps to develop yourself as an educational innovator, including 1) Start with what interests, 2) Plan following the goals of the organization, 3) Plan together, 4) Learn by doing it to create new knowledge, 5) Summaries knowledge and keep records of work, 6) Presenting the work, 7) Analysis and evaluation, and 8) Continuing knowledge of innovations, respectively.

2. **Preparing Educational Innovative Organization**

Being an Educational Innovative Organization is the base that will lead to the Learning Organization and continue to the Educational Innovative Organization. In order to be sustainable in being an educational innovative organization according to the objectives and goals set effectively (Gil et al., 2018; Aniskina & Terekhova, 2019), There are six internal and external elements, including (1) Have a vision and strategy that will lead to Educational Innovative Organization; (2) Create a culture that supports educational innovation in every dimension organization; (3) There are processes and practices conducive to educational innovation; (4) There is a leadership team that is committed to being an organization of effective educational innovation; (5) There is a team to create educational

innovation; and (6) Promote educational personnel in the initiative and create educational innovation. Therefore, it can be summarized by the overview of the beginning of the innovative organization, which is effective, as shown in Figure 3.

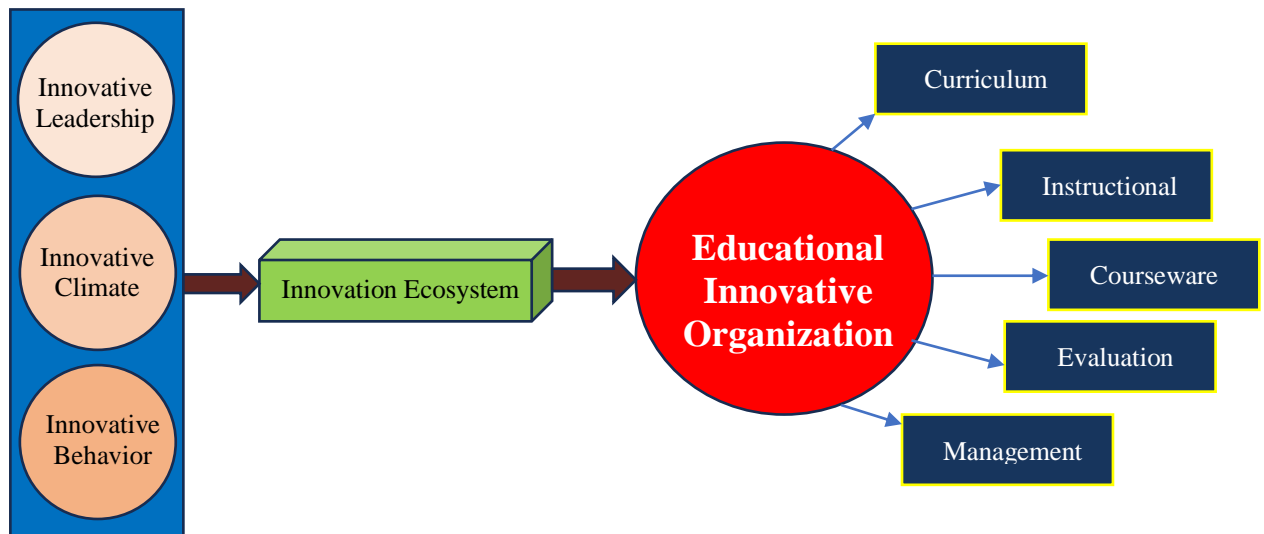


Figure 3. Educational Innovative Organization

From such elements, therefore born as a new organizational management concept in changing the organizational characteristics with knowledge and innovation as the main factors. To be an “Educational Innovative Organization”, the main factors must generally be as follows (Saengkaew et al., 2021).

1) *Structure*: It should look like an organic structure; it is a flexible organization, not too attached to the original process. There is an adaptation to the environment. There is a decentralization of management that does not stick to the supervisor. There is communication at all levels between the command line. And do not have to have a formal form (Horizontal Communication).

2) *Size*: Large organizations have an advantage over small organizations in terms of funding, with a focus on R&D advantages, expenditure, support for various technologies, Personnel development and effective staffing, and having more specialists, which is good for creating new knowledge. On the contrary, small organizations have advantages over large organizations, especially in management and characteristics within more flexible organizations. There is more proximity to customers. There is a smaller administrative stratification (Low Hierarchies). However, the organization’s size does not directly affect innovation by focusing on the attention to the development of innovation of the organization (Level of Concentration) and including various external factors such as Industry Cycle, Market conditions, government policies, etc.

As for the trend of changing the organization to educational innovative organization in the past “Thai education system” is often seen as having a management that is not equal to change, not flexible, focusing on the accuracy of the process rather than the achievement of work. Collaboration between agencies is still stuck. They are not linked as the same process Administration adheres to the legal power framework. The coordination of relationships with the agency that supervises education work is in a way that the government is the leader and the educational institution is the party. However, the gradual change in social and technological factors will greatly impact future work, such as Automation, Cloud Computing, Smart Academy, Artificial Intelligence: AI and Aged Society. These challenge

organizations to prepare for the wave of change, so they hear ideas like extending retirement, adopting robots or automation instead of basic labour, and Flexible Working Hours To meet the needs of new workers (Schildkamp et al., 2020). The concept that the organization can be applied in the management of education in the organization to step into the organization of innovation, including (1) Finding people to suit the job, (2) Keeping talented people within the organization, (3) Restructuring the organization to comply with all digital changes, and (4) Applying digital strategies to help increase the efficiency of the organization.

Therefore, it can be concluded that rapid changes in society and technology prepare educational organizations to cope with changes. Factors that make educational organizations change by leading to Educational Innovative Organization can move forward by finding suitable people for the job, binding talented people to the organization and applying digital technology appropriately (Phakamach, 2023). In addition, educational institutions must also be able to manage research and innovation that are well innovated. Both in terms of management, learning management, and academic management, make this work happy, enjoy the work, have a high standard as the institution needs and have been continuously developed in all aspects, good people, talented people, is an institution that can manage research by the needs of innovators. Other educational institutions appreciate it and participate in developing a sustainable and endless learning society (Supermane, 2019). Academy leaders should encourage all researchers, innovators, and collaborators to contribute to the institution's innovative modelling and strategic planning. As well as making personnel feel that innovation and creating ideas through the knowledge obtained from research is everyone's duty and responsibility (Woulfin & Spitzer, 2023). Moreover, the institutional leader should allow everyone to express their opinions independently and determine the direction of each educational institution creatively to aim for Thailand's educational innovative organization to be international can continue to grow sustainably in the future.

Conclusion and Recommendation

Stepping into the digital world of Thai society makes education's economic and social activities all progress quickly. Highly competitive, entering Big Data through the online world, changing the characteristics of Thai national youth, including graduates at all levels. Education has become an important tool to raise the country's human resources quality to prepare the workforce to be an important mechanism for developing the Thai economy and society to the regional and international economic stage. Therefore, all countries must bring technology and educational innovation into education management. To use the management of educational institutions to be effective and up to date with the changes that occur. In addition, educational leaders play an important role in building the maturity of leadership so that the educational management process of each institution achieves its goals and is up to date with change. In addition, the government sector has added research and development, production and development of technology for education, including monitoring, inspection and evaluation of the use of technology for education. In order to make the use of that is worthwhile and suitable for Thai people's learning process and raising funds to establish a technology development fund for education, including assessing the quality and efficiency of production and the use of technology for education. Therefore, the mechanism can manage educational innovation. It is the process of organizing education that educational institutions need to bring new educational technology and innovation to be used for the development of courses, teaching materials, teaching

measurement and evaluation and management. To develop education at all levels more effective and effective compared to the international.

The aftermath of the education disruption modification, including education reform, makes the role and main function of modern educational institutions at all levels have the characteristics they should have. Support thinking tools as a consultant for personnel within the institution and external innovation units that see the possibility, including persuading those who are involved and interested in innovation and creativity in education. In the end, the institution's direction will be determined by the common opinion of the educational institution to survive in the future. Under the rapidly changing environment of the world, creativity can draw the potential of people in the institution to use it effectively and not stick to the original rules that limit people's imagination in the education industry. Moreover, the importance of educational institutions that must support research drives cannot be limited to the duty of academic support to research to improve academic promotion. However, it should start from cultivating innovative ideas at the foundation level for researchers and inventors of educational institutions both domestically and internationally interested in bringing research output to academically. It is like a connector for the supply and demand of innovative work within various educational institutions to meet by focusing only on tasks that can be practical and beneficial to learners.

This article presents the importance of concepts and theories of innovation, innovation organization, educational innovation, The importance of educational innovation, types of educational innovation, the process of creating and developing educational innovation, educational innovation diffusion, a model of educational innovation and educational innovative organization, changing the traditional organizational paradigm to educational innovative organization. That consists of innovative leadership, innovative climate, and innovative behaviors in teachers and educational personnel, including the mechanism and process of modern education management that can lead educational institutions to be international educational innovative organization in the digital era. Finally, all the above content can be applied in developing and creating educational organizations to be an educational innovative organization in the digital era for further human resource national development.

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