Development of Strategies for the Use of Innovative Information in Education for Secondary Schools under the Office of the Basic Education Commission in the Eastern Region

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Abstract— This research paper aims to 1) Develop strategies for using innovative information for education for secondary schools under the Office of the Basic Education Commission in the Eastern Region. A multidisciplinary study of 6 schools, a semi-structured interview tool, frequency percentage statistics, and a meeting of 11 expert groups. By finding the consistency or index of consistency between each question and the purpose (IOC). The results of the research revealed that the development of innovative strategies for educational information for secondary schools under the Office of the Basic Education Commission in the Eastern region consisted of 8 strategies, 32 projects / activities, 80 indicators as follows: There were 4 projects / activities 10 indicators 2) Strategy for using innovation information for education with 4 projects / activities 10 indicators 3) Instructional management strategy with 4 projects / activities 10 indicators 4) The learning process strategy has 4 projects / activities, 10 indicators, 5) Resource strategy in learning management. There are 4 projects / activities, 10 indicators, 6) Network strategy for information technology cooperation. Projects / activities 10 indicators and 7) Strategies for promotion and development of personnel: 4 projects / activities 10 indicators 8) Promotion strategies and educational media have 4 projects / activities 10 indicators.


I. INTRODUCTION

Innovation is important to many studies because in the globalized world the world is changing rapidly in all areas, especially advances in both technology and information. Education therefore needs to be developed to change from the existing education system to be up-to-date with changes in technology and changing social conditions in order to effectively solve some educational problems. Likewise, changes in education require education about educational innovations that will be used to solve certain educational problems, such as related problems, greater number of learners, modern curricula development. Produce and develop new media to respond to human learning more with a shorter period of time. The application of innovations in the educational management system also contributes to the use of educational resources. Learning is effective,
such as self-learning, the rapid advancement of the academic world, especially after the Second World War onwards, new technologies and inventions have been invented in the multiplicity of societies directly affects the changes and adjustments in the curriculum of educational institutions and results in a chain of teaching problems, program selection and understanding of new content. of students the severity and complexity of these problems has continued to increase as the amount of new academic content is vast beyond the ability of those involved to choose to memorize and present them in the same way. Therefore, it is necessary to use technological and innovative tools suitable for Situations such as the presentation of academic information by cassette tapes, microforms and laser discs, computerized learning guided by the rapid change of society which is affected by the development of science and technology. As mentioned above, it has a direct impact on the lives, adaptation and development of students. Personal and social guidance to students requires the use of technology and innovations that are appropriate for the situation to be able to provide a comprehensive range of services. Information society or information society resulting from the development of electronics, computers and telecommunications technology has made all forms of news - sound, still images, animations, graphics and computer information - can be transmitted quickly in every corner of the world. The society of today and the future will be a society that is flooded with information and news [7].

Today's large schools tend to increase steadily as the school-age population declines and the popularity of parents wishing to send their children to study in the city makes education management unable to adequately reflect its quality and efficiency, so first things first. What small schools should do is to seek ways to develop their own schools to remain effective. And from the results of the research, it was found that, in an effective way to manage small schools, schools need to build new knowledge bases and bodies of knowledge through the 3 aspects of relational participation processes. Including 1) innovation dimension Communication Technology and Information (ICT) 2) dimensions of natural resources, environment and wisdom, and 3) dimensions of participation processes and networking systems. In addition, policy recommendations on inputs by creating a quality development plan for teachers and administrators of small schools to have knowledge and competence in content, learning management skills Production and use of media in various teaching and learning management, the use of ICT media, measurement and evaluation that are suitable for learners. Process Encouraging schools and communities to contribute to the provision of cutting-edge technologies that facilitate learning such as computers. Set of satellite receiver equipment, teaching materials and innovation for use in learning management and management (Jumplala et al. 2014). One of the factors contributing to success will lead to upgrading the quality of teaching and learning to meet the quality standards of basic education of Small schools are aimed at improving the quality of teaching by adopting innovative combinations of information and communication technology for teaching and learning in small classrooms (Wongwanit, 2013). Educational institutions must study and develop technology management strategies. Information is used for educational administration. Develop readiness in information and communication technology for educational institutions and educational agencies under the jurisdiction for learning. and management in accordance with strategies, indicators, relevant departments and timeframes for implementation. Operate in accordance with the policy that can support the change of the global society [12]

The development of strategies for using educational information innovation for secondary schools under the Office of the Basic Education Commission in the Eastern Region is therefore very important to the education management of secondary schools under the Office of the Basic
Education Commission in the Eastern Region. In developing a management information system with basic information that is comprehensive, sufficient, accurate and up-to-date, personnel have the knowledge and access to the efficient use of ICT media that will enhance the quality of education in small schools according to basic education standards.

**II. RESEARCH OBJECTIVES**

The objectives of this research article were

1. To develop strategies for using educational information innovations for secondary schools under the Office of the Basic Education Commission in the Eastern Region

**III. RESEARCH METHOD**

Research on the development of educational information innovation strategies for secondary schools under the Office of the Basic Education Commission in the Eastern Region. The research was carried out in two steps as follows:

1. The study of documents and related research: the researcher studied documents and research related to the development of strategies for using educational information innovations for secondary schools under the Office of the Basic Education Commission in the Eastern Region. Resources at this stage including Documents, textbooks, research articles, and electronic media both domestically and internationally by analyzing and synthesizing and organized into categories

2. Field Study

   2.1 Interview with experts: Researchers interview experts. 9 people in the issue of developing strategies for using innovative information for education for secondary schools under the Office of the Basic Education Commission in the Eastern Region

   2.2 Multi case studies: 5 model schools, multi case studies, model schools that have been awarded the Best Practice Award. Education management with distance technology through information technology of 3 schools and 2 schools that use information and communication technology for education in management

   2.3 The researcher brings the results of the study, documents, and related research. Inquiring about the components of the development of innovative educational information strategies for secondary schools under the Office of the Basic Education Commission in the east from model school interview with experts and multidisciplinary studies of model schools to synthesize in order to create a draft development strategy for using innovative information for education for secondary schools under the Office of the Basic Education Commission in the east

   2.4 Researchers develop strategies for using educational information innovations for secondary schools under the Office of the Basic Education Commission in the east by using expert group meeting techniques

3. Key Informants

   3.1 Interviews with expert’s key informant: Consisting of 9 qualified persons, obtained by selecting a specific (Purposive Sampling) as follows: Academics are those with a degree of not lower than a doctorate degree. Hold an academic position not lower than Associate Professor and have teaching experience about information technology not less than 5 years, 3 people, school administrators, namely the director of secondary schools under the Office of the Basic Education Commission in the east. Doctorate degree Administration Studies or related fields or academic standing not lower than special expertise and work in secondary schools under the Office of the
Basic Education Commission In the eastern region, not less than 5 years, 3 persons are supervising students under the Office of Secondary Education Service Area Responsible for the development of innovative media and educational technology for not less than 3 years and having at least a master's degree, 1 person. Teachers are teachers responsible for information and communication technology in secondary schools. under the Office of the Basic Education Commission In the eastern region, not less than 3 years, under the Office of the Basic Education Commission, 2 people

3.2 A multi-case study of 5 model schools, who provided important information for each school. consisted of 5 school administrators, 2 heads of academic administration group and 2 teachers responsible for information technology and communication.

3.3 Development of strategies for using innovative information in education for secondary schools under the Office of the Basic Education Commission in the east by using the Experts Group Meeting technique, key informants consisted of 11 experts obtained by selecting a specific method (Purposeful Sampling) consisting of 3 academicians, 3 educational administrators, institution administrators. The study consisted of 2 people, a supervisor of 1 and a teacher of 2 people.

Step 4 Tools and methods used in the study
4.1 Interviews, research tools It is a semi-structured interview format.
4.2 Multiple Studies research tools It is a semi-structured interview format.
4.3 Experts Group Meeting Tools used in research It is a model for assessing the consistency and conformity with what needs to be measured, i.e. IOC (Index of Items Objectives Congruence), strategies for using information and communication technology, for education for developing educational information innovation strategies for secondary schools under the Office of the Basic Education Commission in the east.

Step 5 Gathering Information
5.1 Data collection interview
5.2 Multi-case study of data collection Coordinating with the school director who studies multi-case
5.3 Data Collection Expert Group Meeting by Expert group meeting of 11 experts

Step 6 Data Analysis
6.1 Interview Data analysis the researcher used the data obtained from interviews and documents. Let's analyze the content and categorize it according to various issues and then apply the results to create a research conceptual framework.
6.2 Multiple Studies Data analysis the researcher used the data obtained from a multi-case study of model schools that have won the award for best practices in remote technology education through information technology to analyze the content and categorize them according to various issues. Statistics are frequency values.
6.3 Data Analysis Expert Group Meeting The researcher gathered the data obtained from the Expert Group Meeting and the results of the strategy congruence assessment to summarize, analyze the content and categorize it according to various issues. Using statistics is the frequency value. and the determination of the Index of Items Objectives Congruence (IOC) [11]

Step 7 Summary of research results and presentation of research results.
From the results of the study to develop strategies for the use of educational information and communication technology for the development of strategies for the use of educational
IV. DISCUSS THE RESULTS OF THE RESEARCH

Developing strategies for using educational information innovations for secondary schools under the Office of the Basic Education Commission in the eastern region, there are 8 strategies, 32 projects/activities, 80 indicators, namely 1) strategies for management within educational institutions, there are 4 projects/activities, 10 indicators, 2) strategies for using information innovation for education, there are 4 projects/activities, 10 Indicator 3) Teaching and learning management strategy, there are 4 projects/activities, 10 indicators, 4) learning process strategies, there are 4 projects/activities, 10 indicators, 5) Resources strategy in learning management, there are 4 projects, /activity 10 indicators 6) information technology cooperation network strategy, there are 4 projects/activities, 10 indicators, and 7) personnel promotion and development strategies, there are 4 projects/activities, 10 indicators; Promotion and educational fun media with 4 projects/activities, 10 indicators, consistent with the concept of [1] which recommends educational institutions to education 4.0 that should focus on children to grow according to their potential. and can generate productivity or ideas that benefit innovation In which Thaï education must teach children to have knowledge and understanding, to be able to analyze and work properly. Each child should produce a product that is appropriate to his learning level through the process of searching or researching. Practices that lead to the creation of products to be utilized are the starting points for new innovations. Must strengthen the principles of critical thinking, creativity, including a productive mind that children can learn the process of creating jobs. Because the cause of education 4.0 The important way is to prepare people. Teachers have to push the children to invent new things. Start with self-exploration, learning, and productivity.

2. Development of strategies for utilizing educational information innovation for secondary schools in the use of information and communication technology for education on information technology infrastructure 4 projects/activities 10 indicators are consistent [3] said that the strategy of Infrastructure The main strategies is the ICT Infrastructure Development Strategy for Education. It consists of secondary strategies and activities as follows: device development, development and network development.

3. Strategy development in terms of teaching and learning management, there are 4 projects/activities, 10 indicators consistent with [9]. A study of the development of information technology and communication technology management strategies for school education was studied. Under the Education Service Area Office, It was found that teaching-learning management development strategies The main strategies are strategies to promote and encourage teachers and educational personnel to apply ICT in teaching and learning, which consists of a secondary strategy, which is the development of instructional management, has activities to encourage teachers to analyze individual learners. Encourage teachers to organize teaching activities to develop learners to their full potential. Encourage teachers to regularly assess learners' needs. Encourage the division of students into groups to develop learners to develop their potential clearly. Encourage a variety of activities suitable for each group of students. Encourage teachers to create an environment that is conducive to the learning process. Encourage students to use ICT to learn on their own. Develop teachers' commitment and dedication to improving the quality of students and schools. Encourage teachers to have a system of supervision for teaching and learning for all subject groups. for academic cooperation and assistance Encourage teachers to bring local
wisdom to help in teaching and learning management. and encouraging teachers to evaluate the use of ICT
4. Strategy development Regarding the learning process, there were 4 projects/activities, 10 indicators consistent with [3]. The development of information technology and communication technology management strategies for education was studied. for large schools Under the Office of Secondary Education Service Area, Region 4, Pathum Thani Province, it was found that the strategies for developing the learning process were the strategies for developing learners’ potential in ICT for education. It consists of secondary strategies and activities as follows: 1. Development of characteristics or attitudes and 2. Development of ICT knowledge and skills, and is also consistent with [4] having studied strategies for effective use of information technology. for schools to expand educational opportunities Under the Office of Primary Education Service Areas in the Northeast found that the learning process development strategy the activities consisted of 1) promoting and encouraging teachers to use information and communication technology for learning to use in teaching and learning appropriately, and 2) developing technology skills for teachers and personnel.
5. Strategy development in terms of resources in learning management, there are 4 projects/activities, 10 indicators consistent with [5] said that learning resources refer to the management of educational materials of educational institutions. By providing a website that is used to manage teaching and learning for students with a source management system. learning all learning subjects Media collection Innovation in teaching and learning in information and communication technology in a systematic way is organized as a learning resource repository Information Technology Media Center and communication, electronic libraries, etc., according to the potential of the educational institution, in accordance with [6] said that learning resources mean educational institutions have a website used in teaching and learning. There is a learning resource management system. media collection systematic teaching innovation have a library of learning resources electronic library or information technology media center According to the capacity of educational institutions and [7]. learning resources refer to all kinds of resources that learners can use either individually or in combination. informal to facilitate learning resources include news, information, people, materials, tools, techniques and buildings.
6. Strategy Development As for the information technology cooperation network, there are 4 projects/activities, 10 indicators consistent with [8] said network development. or the development of information technology means coordinating with the government, private sector, state enterprises, municipalities, local government organizations Religious leaders and people who realize the importance of education in order to support and assist basic education institutions to develop their work towards the vision, mission, objectives and goals effectively. Providing knowledge services to the community by using information technology and communication as a tool In line with Kitjasajja (2016), it was found that strategies for network development, development of information technology, main strategies are strategies for improving the quality of ICT equipment and network systems. It consists of the following secondary strategies: 1. Developing efficient equipment and network systems and 2. Maintaining
7. Strategy Development On the promotion and development of personnel, there are 4 projects/activities. 10 indicators consistent with [9] have studied the development of information and communication technology management strategies for school education. Under the Education Service Area Office Bangkok found that personnel development strategies There are main
strategies, namely, campaign strategies for teachers to and personnel to develop ICT skills for education and 2. to develop ICT knowledge and skills.

8. Strategy Development In terms of promotion and educational fun media, there were 4 projects/activities, 10 indicators consistent with [10]. The development of information systems for student affairs at Don Thao Wittaya School was studied. Nakhon Ratchasima Educational Service Area Office, Region 1 found that the results of the development of student affairs information system Don Thao Wittaya School There are results of the implementation of the educational framework consisting of 4 tasks, namely work according to the Act and regulations related to students, student performance promotion work. Curriculum promotion events held in schools and building relationships between schools and alumni Able to respond to the user's information system development needs as well as being quick to search There is a suitable system for data storage, easy to search, accurate and up-to-date reporting. create satisfaction for the users of the program

V. CONCLUSION

Development of strategies for using educational information innovations for secondary schools under the Office of the Basic Education Commission in the east Consists of 8 strategies, 32 projects/activities, 80 The indicators were 1) strategies for management within educational institutions, there were 4 projects/activities, 10 indicators; 2) strategies for the use of information innovation for education. 4 projects/activities 10 indicators 3) teaching and learning management strategies have 4 projects/activities 10 indicators 4) learning process strategies There are 4 projects/activities, 10 indicators. 5) Strategies for resources in learning management. There are 4 projects/activities, 10 indicators 6) Strategies for network cooperation in information technology, there are 4 projects/activities, 10 indicators and 7) Strategies for promoting and developing personnel with 4 projects/activities, 10 indicators. 8) Strategies for promoting and supporting educational media: There are 4 projects/activities, 10 indicators. Can be applied in educational information and communication technology administration for secondary schools. under the Office of the Basic Education Commission in the east to be really effective

VI. SUGGESTION

From research results the researcher has the following suggestions:
1. Recommendations from research
   1. The results of the development of strategies for the use of educational information innovations for secondary schools under the Office of the Basic Education Commission in the Eastern Region are appropriate and can be applied in the administration of information and communication technology for education. for secondary schools under the Office of the Basic Education Commission in the Eastern Region to be effective
   2. Suggestions for the next research
      For the next research issue, research should be done on the issue of developing innovative strategies.
      1. To study model schools in private communities about the process of developing a model for implementing the strategy of using information and communication technology for education for secondary schools under the Office of the Basic Education Commission in the Eastern Region into practice.
REFERENCES