Current States, Problems and Achievements Based on Educational Information and Communications Technology Standards in Primary Schools under the Office of Nakhon Phanom Primary Educational Service Area 1

Inthira Thararom [1*]

[1] *Educational Administration and Leadership Program,* Nakaranurak Nakhae Road, Nakhonpanom District, Nakhonpanom, 48130, Thailand

*Corresponding Author: Ch.indhira@hotmail.com

ABSTRACT

This study aimed to 1) investigate current states, problems and achievements of the performance-based educational information and communications technology standards in primary schools, 2) compare current states, problems and achievements of the performance-based educational information and communications technology standards in primary schools, and 3) find out guidelines to develop the performance-based educational information and communications technology standards in primary schools under the Office of Nakhon Phanom Primary Educational Service Area 1. Samples consisted of 84 school administrators, 84 teachers in charge of the information and communications technology (ICT) as well as 168 teachers. Tools used to collect data were a 5-level rating scale questionnaire with Index of Item Objective Congruence of .08-1 and reliability of.993 and a form of interview. Percentage, mean, standard deviation, t-test and F-test (One-Way ANOVA) were utilized.
Findings were as follows:
    1. The current states, problems and achievements on the performance-based educational ICT standards in Primary schools under the Office of Nakhon Phanom Primary Educational Service Area 1, in general and in particular, were in the moderate level.
    2. The comparison of the performance-based educational ICT standards in the schools showed no significant differences in general.
    3. The guidelines of the development on the performance-based educational ICT standards in the primary schools included infrastructure, learning resources along with co-operation from the public, private as well as community sectors.
Keywords: Educational Information and Communications Technology Standards 2

INTRODUCTION

In the present time, information technology can be applied in our daily life increasingly. Many technologies have been employed to develop various types of works either education systems or expansion of business opportunities, administration/management of a nation, state sector performance, public

health services, religion maintenance or promotion along with cultures leading to the building of innovations to facilitate and support the endless needs of human beings. Hence, the needs to keep pace up with technology progress have to be learned to keep pace with many changes occurred to be applied to the living of life (Sukhum Chaloeisap and other, 1012, p.199).

The framework of information and communications technology (ICT) policies of Thailand BE 2554-64 (ad 2011-2020) has been set up. The main draft was as follows: VISION- ICT is regarded as the significant drive in leading Thai people toward knowledge and intellectual. Thai economy would grow to become sustainable growth, equality, that is, Thailand would develop with cleverness. The economic and social application would be based on knowledge and intellectual through the provision of opportunities to every citizen. The equal participation in the development process leads to the balanced and sustainable growth. In addition, the master plan of Thailand's information and communications technology BE 2552-2556 (2009-2013) designated that the ICT development has been focused on the developmental aspect toward the society of intellectual and learning consistent with the National Economic and Social Plans weaving the continuity of the policy of the ICT 2020 with an emphasis on the correction of the significant weaknesses on the development of the ICT in Thailand. This has been done by the setting up of visions and strategies: Thailand is the society of SMART THAILAND based on the ICT to support the development toward the sustainable economy, society, knowledge base, and innovation. (Ministry of Education, 2011.p.2-6)

According to the National Education Act BE 2542 (AD 1999) and Amendment,

Edition 2 BE 2545 (AD, 2002) Article 335 and ministerial regulations, it designated the criteria, regulations and methods of decentralization of administration and management of education BE 2550 (2007) that the Ministry decentralized power and authority in educational administration and management to the committees in the offices of educational service area and school committees as well. Thus, schools have their own tasks in educational administration and management that full of scattered data or information in various parts of schools. If there is no system on keeping systematically, there could be no facilitation or obstacles in applying it or there is some information inconsistent with the needs of users/consumers leading to the usefulness on the school development. In case of the information system, there should be procedures pr stages in processing in formation in order to obtain quality information relevant to the needs of users/consumers (Office of the Basic Education Commission, 2000. 13-17).

The application of information technology is regarded as an important aspect in solving problems on education toward achievements whether administrative aspect or management in schools. The planning seen in the development strategies of the ICT in the Ministry of Education consistent with the master plan of information and communications technology (Edition 2) supported instruction with information and communications 3 technology to upgrade educational efficiency in Thailand (item 3) develop the infrastructures of the information technology and communications technology to support education in Thailand (item 4); apply the information and communications technology to support administration and management as well as educational

administration conducive to the building of good governance in Thai society (Office of the Permanent Secretary, Ministry of Information and Communications Technology, 2009. p.4-7). Thus, to maximize the benefits of applying the ICT in instruction, the Ministry of Education has set up the policies and standards on information and communications technology development to support the application of the ICT in schools as well as to prevent dangers from the Internet for learners and teachers as well as educational personnel. In order to allow people to gain benefits and access to services of the ICT appropriately, the Ministry of Education announced the policies and standards to provide the ICT for schools along with educational agencies to perform something called "Standards of the ICT for primary schools under the Ministry of Education comprising the following 6 aspects: 1) Administration and management in schools, 2) Infrastructures, 3) Instruction, 4) Learning procedure, 4) Learning resources ,and 6) Participation from the state and private sectors along with communities." (Announcements of the Ministry of Education, 2007).

The Office of Nakhon Phanom Primary Educational Service Area 1 is an organization/ agency in charge of administration and management of education toward the AEC in the year 2015 with the strategies on the development of quality and standards of education in every level based on the core curriculum and the promotion of abilities on technologies as tools of learning along with the development and/or the application of innovations to uplift abilities in educational standards such as the application of the ICT for instruction, production of media. Internet search, keeping individual information via P-obec system, the use of

GFMIS and Web-Form system and E-form, In Coming-Out Going documents system in e-office as well as e-filing for coordination among offices of educational service area and schools and OBEC as well. The problem found is the limitation of the high speed Internet network which is nor covered by the whole area. This makes the connection of the connection equipment seems to be a shortage (The Office of Nakhon Phanom Primary Educational Service Area 1, 2013. p.4-7). According to the afore mentioned, the researcher believes that the schools equipped with the information system, that is perfect, fully-equipped and up-to-date can apply the system comfortably and consistent with their own needs to help make educational quality development with efficiency and effectiveness. This causes confidence based on academic principles, evidence and facts that can be checked. The researcher as the one who is in charge of the school ICT and interested in investigating the states of the application on the standards of the ICT in the primary schools under the Office of Nakhon Phanom Primary Educational Service Area 1 on order to know what level is the use of information along with at what level are the problems, obstacles and achievements to be applied to the development of ideas and the building of new alternatives in various applications regarded as data for further studies on management toward educational development in the future. 4

Purposes of the study

The objectives of this study were:

1. To identify the current states, problems and achievements based on the application on educational standards of the ICT in the primary schools under the Office of Nakhon Phanom Primary Educational Service Area 1

2. To compare the current states, problems and achievements based on the educational standards of the ICT in the primary schools classified by gender, position attained, working experiences and school size

3. To find out guidelines of the development based on the educational standards of the ICT in the schools

METHODOLOGY

Participants

This study was focused on the exploration of the current states, problems and achievements of the educational standards of the ICT in the primary schools. The researchers identified ideas, theories concerning the educational standards of the ICT in the schools under the Ministry of Education (Announcements of the Ministry of Education, 2007) including 6 aspects as follows: 1) Internal administration and management in the schools, 2) Infrastructures, 3) Instruction, 4) Learning process, 5) Learning resources, and 6) Participation from the state and private sectors as well as communities. Data collected as variables were set up as the framework of this study: Independent Variables Dependent Variables

Research instruments

1. A tool used in collecting data was a rating scale questionnaire developed by the researcher classified into 3 stages:

   • Stage I Data on respondents included gender, position attained, working experiences and school size

• Stage II Data on the current states, problems and achievements based on the educational standards of the ICT in the primary schools

on the ministerial announcements in BE 2550 (2007) comprising 5 aspects as follows: 1) Administration and management in the schools, 2) Infrastructures,3) Instruction, 4) Learning procedure,5) Learning resources, and6) Participation from the state and private sectors and communities

   • Stage III An open-ended questionnaire regarding the guidelines of the application based on the educational standards of the ICT in the primary schools

2. An instrument applied to collect qualitative data was a structured-interview developed by the researcher based on the achievements of performance with the mean under the overall mean.

Data Collection

1. A letter issued by the Graduate School of Sakon Nakhon Rajabhat University to ask for participation in answering the questionnaire distributed to the school directors who were the samples themselves in the primary schools. There were 84 school directors, 84 teachers responsible for the ICT and 168 teachers-a total of 336 participants.

2. The 336 sets of the questionnaire were distributed to participants and 336 sets of questionnaire were returned. That was 100 percent.

3. The qualitative data were collected on the exploration of quality on the guidelines of development performed via the 10 interviews of experts. 6

Distribution and collection

The population and target group

1. The population employed in this study were those concerned with the application based on the educational standards of the ICT in the primary schools in the first semester of

academic year 2014 classified as 285 school directors,2,327 teachers- a total of 2,612 participants from 262 schools.

2.   The target group consisted for those concerned in the application based on the educational standards of the ICT including the school directors, teachers in charge of the ICT in the schools using Krejcie and Morgan's table (Bunchom Sisa-at, 2013. P.43).

Tools Used in Collecting Data

1. A tool used in collecting data was a rating scale questionnaire developed by the researcher classified into 3 stages:

- Stage I Data on respondents included gender, position attained ,working experiences and school size

- Stage II Data on the current states ,problems and achievements based on the educational standards of the ICT in the primary schools on the ministerial announcements in BE 2550 (2007) comprising 5 aspects as follows: 1) Administration and management in the schools, 2) Infrastructures,3) Instruction, 4) Learning procedure,5) Learning resources, and6) Participation from the state and private sectors and communities

- Stage III An open-ended questionnaire regarding the guidelines of the application based on the educational standards of the ICT in the primary schools

2. An instrument applied to collect qualitative data was a structured-interview developed by the researcher based on the achievements of performance with the mean under the overall mean.

Data Analysis

1. Percentage
2. Mean
3. Standard Deviation
4. Item Total Correlation
5. Cronbach's Alpha Coefficient
6. t-test (Independent Samples)
7. F-test (One-Way ANOVA)

RESULTS

1. The current states, problems and achievements of the application based on the educational standards of the ICT in the primary schools, in general and in particular, were at the moderate level.

2. The effects of comparison of the application based on the educational standards of the ICT in the primary schools, as a whole, showed no significant differences. When classified by various variables, it was found that:

2.1 The current states of the application showed no significant differences in general. When classified by gender, position attained, working experiences and school size, it was determined that there were no differences as a whole and in each aspect.

2.2 The problems on the application had no significant differences as a whole. When classified by gender and school size, it was found that there was a difference at the .05 level of significance. There were no significant differences when they were classified by position attained and working experiences.

3. The guidelines of the application based on the educational standards of the ICT in

the primary schools included the following aspects: infrastructures, learning resources as well as participation from the state and private sectors and communities as well

DISCUSSIONS

1. The current states, problems and achievements of the application based on the educational standards of the ICT in the primary schools, in general and in particular, were at the moderate level. This might be caused by the National Education Act BE 2542 (AD 1999) along with the Amendment, Edition 2 of BE 2545 (AD 2002). This was regarded as the first law concerning the national education with main principles applied in the reform of national education. The promotion of the application based on the ICT has been used in the learning process for the first time. However, in the present time, schools and personnel have responded to the said policies in bringing information technology to be applied in different internal administration and management in schools depending on the different contexts of schools and with problems and obstacles in the application causing the 7 effects of the application of the educational standards based on the ICT in the primary schools to be at the moderate level.

2. The comparison of the current states, problems and achievements of the application based on the educational standards of the ICT in the primary schools classified by gender, position attained, working experiences and school size was as follows:

2.1 The comparison of the states of current application:

2.1.1 The current states of the application classified by gender, as a whole, showed no significant differences. This might be because the educational personnel whether females or males wanted to develop themselves along with to do their job based on one's personal tasks with the same goal, that is, the effects occurred in the organization made no differences to the current states.

2.1.2 The current states of the application classified by position attained, in general, showed no significant differences because the policies and planning regarding the use of information technology for education were set by the schools. The school administrators, teachers in charge of the ICT and other teachers gained understanding in the role and significance along with benefits of information technology which has been applied in the academic affairs, system of information for dissemination and presentation.

2.1.3 The current states of the application classified by working experiences showed no significant differences because at present, the use of information has been widely practiced which made the school administrators, teachers responsible for the ICT and other teachers use various types of information technology to be applied in the development depending upon each one's context. Each paid attention to the significance of this issue making no significant differences on the perception of those with different working experiences whether much or little.

2.1.4 The current states of the application classified by school size, as a whole, showed no differences because the

schools of every size have been allotted budget along with equipment and utensils from the mother organization equally. There was at least a teacher in charge of the ICT in every school. This made no significant differences in the application of the ICT in the schools of different size.

2.2 The comparison of the application:

2.2.1 The problems of the application classified by gender obtained significant differences because male and female teachers had different attitudes or perspectives toward the application of the ICT affecting the different problems.

2.2.2 The problems on the application classified by position attained, as a whole, showed no significant differences because the teachers working under the same office of educational service area obtained the same application plan and policies designated by the same mother organization making them share /obtain the same perception regarding the application of information technology in their schools.

2.2.3 The problems on the application classified by working experiences, in general, showed no significant differences because the problems were regarded as those happened from actual practices. Those teachers with more experiences on working in the field of the ICT became experts eventually. They would see 8 the problems, obstacles differently depending on situations faced affecting their perception toward the problems differently from those with little experiences.

2.2.4 The current states of the application classified by school size, in general, showed significant differences because the budget allotted depending on the number of students in the schools. Thus, the

medium-sized and large schools got budget allotted more than the small schools. More than that, the medium-sized and large schools obtained readiness in the purchase of or search for any types of media used in instruction at the higher level than those small schools. In addition, the small schools faced a lack of teachers responsible for the ICT or if there were some but with little experiences.

2.3 The comparison of the application achievements:

2.3.1 The achievements of the application classified by gender, as a whole, showed no significant differences because all personnel in the schools could see the picturesque of achievements of the organization they belong. There was collaborative participation as a teamwork more than the problems of no importance. This made no significant differences in the achievements of the application.

2.3.2 The achievements of the application classified by position attained obtained no significant differences because the school administrators, teachers responsible for the ICT and other teachers as well did their jobs under the same context and policies designated by the central organization . They collaboratively set up action plans of their own schools. The application was toward the same direction . The current states of the application based on the context of each area affected directly the achievements of the application.

2.3.3 The achievements of the application classified by working experiences, in general, showed no significant differences because all personnel in the organization obtained the goal set on the application under the same framework of policies, vision and mission that made the application go toward

the same direction. The different working experiences had no effects on the achievements of the application.

2.3.4 The achievements of the application classified by school size ,in general, showed no significant differences because the schools of ever size paid attention to the ICT in the administration and management along with support of instruction. The school administrators paid attention to this issue by providing at least a teacher to be in charge of the ICT in every school. The mother organization provided networks of the Internet to cover all schools along with the building of networks and training sessions for those personnel in charge of the ICT as well as the support from other organizations or agencies in the state or private sectors making the achievements of the application not depend on school size.

3. The guidelines of the application development based on the educational standards of the ICT in the primary schools divided into 3 aspects as follows:

3.1 Infrastructures: The schools should have the high speed Internet system with stable signals. The schools should also apply the Internet to support the administration and management of instruction and be able to be employed to search for information by the teachers and students as well. WIFI signals should be provided by the schools to cover every corner of the school premises as well as hardware, software and people ware.

3.2 Learning resources: The school websites on the administration and management of instruction should exist. The websites should be developed and improved to be updated. The ICT room equipped with 9 diverse modern media both for academic

affairs and entertainment equipped with connection equipment ready for use.

3.3 The guidelines in the application development regarding assistance from the state and private sectors and communities showed indicated that these should be included in terms of provision of materials, utensils as well as budget. In case of the schools, the Internet /WIFI should be provided for the service communities of the schools. The communities in the service area should be able to use the learning resources such as computers and Internet at the schools.

3.4 The other recommendations included the school administrators have to pay attention to the application of the ICT for administration and management and support for instruction.

CONCLUSION AND DISCUSSION

1. The survey researches should be conducted to investigate the current states, problems and achievements based on the ICT in the primary schools in the areas of the other offices of educational service area to obtain current information and the information supplemented in an analysis of comparison including the support of development and application in this aspect to be achieved at the higher level.

2. The effects from the research on the aspects of high problems and little achievements have to be done in forms of an action research in order to develop the application based on the standards of information technology in the primary schools to achieve higher efficiency.

3. A research and development (R&D) concerning a model of qualitative application in order to be benefits in planning the use of information technology as well as the

promotion of further education should be considered.

REFERENCES

Chaloeisap, Sukhum. (2012). *Information Technology*. Bangkok: Faculty of Humanities and Social Sciences. Suan Dusit Rajabhat University Press.

Ministry of Education, Announcements. (2007). *Policies and Standards of Development on the Information and Communications Technology*. The Office of Nakhon Phanom Primary Educational Service Area 1 (2013) Annual Action Plan for the Fiscal Year 2013. Nakhon Phaanom: Office of Nakhon Phanom Primary Educational Service Area 1.

Office of the Basic Education Commission. (2010). *Digital Literacy World Class Standard School*. Bangkok: Press of Agricultural Cooperatives Group of Thailand.

Office of the Permanent Secretary. (2011). *Master Plan of the Information and Communications Technology for Education. Ministry of Education 2009-2013*. Bangkok: Ministry of Information and Communications Technology.

Sisa-at, Bunchom. (2010). *Introduction of Statistics*. 7th Edition. Bangkok: Suwiyasan Press.