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The Trends of Education after the COVID-19 Situation in Thailand

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Abstract
This research aims to synthesize the views from domestic and international references on the trends of education after COVID-19 situation, then convey the results of the synthesis to the experts from different groups to examine the trends and the feasibility of mix-method research which would be applied in Thai education after COVID-19 situation. The research conducted an in-depth interviewing of 15 experts and used the discussion method with other target groups of 15 experts. The research results defined the proposals of 31 issues for the trends of education after COVID-19 situation in Thailand. These proposals were similar to those of the educational paradigm shift from the 20th to the 21st century. As a result, Thailand is becoming a more digital society and people have to focus on using information and communication technologies (ICT) to gain the maximum benefits to develop the quality of Thai education.

Keywords: Education after the COVID-19 Situation, Online Learning, Hybrid Learning, Educational Paradigm Shift in the 21st century

1. Introduction

The situation of Corona Virus 2019 or COVID-19 outbreak started in December 2019. The pandemic disease was first found in Wuhan, the provincial capital of Hubei Province in the central China region. On December 30, 2019, the Wuhan Health Commission officially announced lung inflammation of unknown aetiology by the most likely cause of disease transmission from meat sold in a seafood market in Wuhan. Since Wuhan had a high population density, the widespread transmission was passed. After the pandemic outbreak in Wuhan, China and The World Health Organization (WHO) announced the name of the new virus as SARS-CoV-2 or COVID-19, which was the official name of a respiratory disease caused by a new kind of virus that was transmitted between people through respiratory droplets. Then, the World Health Organization (WHO) declared the disease outbreak as the Public Health Emergency of International Concern (PHEIC) on January 30, 2020. Later, the confirmed cases were found in many countries around the world. On March 11, 2020, WHO declared that the big outbreak of COVID-19 and there were sharp increases in numbers of cases outside China such as South Korea, Italy, Iran, Spain, and France. There were 3,000-4,000 new patients per day around the world. In additional, the numbers of dead patients continued to increase by 200-300 per day. The mortality rate caused by this infectious disease was about 3.5%, and most of the severely ill patients were the elderly, smokers, and people with congenital diseases such as heart disease or diabetes. Moreover, several countries in Europe, the United States, Brazil, Russia, India and South

Africa had gradually become the centers of the epidemic. Some countries were in a continual infectious situations and some were new pandemic areas. It was found that the mutation crisis of COVID-19 caused more rapid spread of this disease. The report on February 11, 2022, revealed that there were 406, 270, 115 infected persons, 326,029,900 recovery patients and 5,808,584 dead persons (Department of Disease Control, Ministry of Public Health, 2021).

As for the situation of the COVID-19 epidemic in Thailand, it was found from the survey of Ophanukhrakul (2021) that since the first case was found on January 19, 2020, the number of infected people had slowly increased from one to ten persons at the beginning stage to a hundred ones in March 2020. It was the first wave of an outbreak which led to a lockdown situation with intensive disease control measures. This resulted in having fewer than 5,000 COVID-19 infected persons from January 12 to December 19, 2020. Until the second wave of the outbreak on December 20, 2020, there were 576 new infected persons, bringing the total number to 5,289. More than 10,000 people were infected on January 9, 2021. The number of infections in Thailand had been increased sharply especially in January 2020. This situation brought about the government's alert level from 3 to 4. Due to a significant increase in numbers of infected people and the spread of the ultra-transmissible Omicron in many provinces, the government suggested Thai people to refrain from the following activities, namely eating together, drinking alcohol in restaurants, going to all kinds of high-risk places, getting close to others outside the house, participating in group activities, not taking all types of public transport, and travelling abroad. In addition, high-risk places for catching Coronavirus such as bars and restaurants were also closed. The government also suggested people to work from home and refrain from cross-provincial travel. Moreover, others measures were used to prevent the epidemic increase such as Covid-19 vaccinations, Polymerase chain reaction (PCR) test or Antigen Test Kit (ATK) test.

Anyhow, the outbreak of the disease raised various questions for the study. How will the Ministry of Education design an effective learning in epidemic situations? What will be the role of technology in learning? Will technology make the inequality of education worse? Therefore, the Ministry of Education adopted a learning management policy under the epidemic situations by closing educational institutes and having them continue online teaching and learning activities at all levels and in all educational types: basic education, vocational education, private education, non-formal and informal education, and education for the disabled and the disadvantaged. Important skills such as English and digital technology (coding) (Office of the Education Council, Ministry of Education, 2020) had to be prepared during the semester break. At the same time, Department of Health, Ministry of Public Health (2020) the Ministry of Public Health provided the three-staged guideline for COVID-19 protection in educational institutes: before the opening day of the institutions, at the opening day and during the semester. There were recommendations on various practical measures for each stage.

Following the mentioned guidelines affected negatively the teaching and learning situations: the existing problems aggravated, the disparity in quality of education became wider, the stakeholders composed of students, teachers, parents, and schools had difficulty coping with a new measure of the Ministry of Public Health. In addition, the pandemic of COVID-19 forced the students to stop attending school. They had to do their study at home by following online learning programs or satellite television services provided by the schools. The impacts were as follows: 1) Students from poor families were at risk of permanent absence from school 2) Students had experience regression in learning 3) Students suffered from mental health problems and accumulated stress from online learning 4) Teachers had problems with teaching and paperwork increases 5) Parents had problems of taking care of their children 6) Schools had financial problems. (Watcharasindu & Chiratrachoo, 2021) This was in accordance with the World Bank estimation of COVID-19 crisis that would disrupt the studies of most students or would result in a decline in the quality of education. The impact of COVID-19 would also be a crucial factor which would increase the inequality of education in the country. The students living in poor families or in remote areas and the students who had learning disabilities would have difficulty adjusting themselves to online learning. Finally, it would also increase the disparity between high and low-income countries. (Tuangrattanaphan, 2021)

2. Research Objectives

The COVID-19 crisis was one of the biggest education challenges for most countries which required great effort to solve educational problems. They had to manage to keep on teaching and learning activities of the students during the unusual time. Nevertheless, this crisis created something new in education and the new learning experiences during the pandemic time would become important lessons which will lead to the development of new thinking. Moreover, the education system will be adapted in response to the current situation and will be flexible for the educators to develop the learners' abilities towards the desirability of educational policy. However, the outbreak of COVID-19 was only at the beginning stage of the adjustment of the educational system in Thailand and in the world. Therefore, there is the question 'What will be the trend of education in Thailand after COVID-19?'. The researcher therefore defines the objectives of this research as 1) To synthesize views on the trends of education after the COVID-19 situation in Thailand from domestic and international references; 2) To bring the results of the synthesis to the experts from different groups to examine trends and feasibility for mix-method research; 3) To present the results of research on the trends of education after the COVID-19 situation in Thailand.

3. Literature Review

The researcher studied the views on the trends of education after the COVID-19 situation in Thailand from both domestic and international reference sources. The results of the study revealed 26 proposals for applying in the education after the Covid-19 situation in Thailand as follows:

1. *Re-evaluating what matters*: The threatened COVID-19 situation forced everyone in the world to find an effective way to deal with unexpected situations. Leaders must know how to turn a panic situation into a positive impact though a harmonious blend of roles, leadership and innovation. (Marymount University, 2021)
2. *Doing safe and uninterrupted return to school:* While the suspension at schools may have made it more adaptable to online learning, studying in the classroom is still a preferred approach by many schools. When the situation of the outbreak starts to fade away, the safe and uninterrupted return to school will be applied for better education. (Amarinthewa, 2021)
3. *Providing Outdoor classroom as an alternative to safe and open learning:* Learning is not only just sitting at the desk and writing on the board in the classroom, it is also relevant to outdoor classroom situations which allow students to experience up close and do their learning from the nature and the way of life of the area. The activities for learning the environment of the area have to be prepared for the students. (Amarinthewa, 2021)
4. *Adjusting the course to open the door to the world after COVID-19:* The huge impact of the outbreak will remain and will change the world completely. As a result, the curriculums need to be modified in the long term to prepare children and the youth to grow up to be ready to cope with the changing world of the coronavirus. (Amarinthewa, 2021; International Commission on the Futures of Education, 2020; Intharawiset, Jareoan-sa, & Yūang-sǭI, 2021; Vegas &Winthrop, 2020)
5. *Integrating online teaching and learning management of each school:* The COVID-19 outbreak brought an important role of online teaching and learning management to the world of education. From now on, the two learning aspects have to be integrated into each educational institute. (Watcharasindu & Chiratrachoo, 2021)
6. *Providing financial support for the educational institutions and parents:* This should be done to reduce the risk of the students' dismissal since the educational institutions and the parents have no financial support for the students' expenses. (Watcharasindu & Chiratrachoo, 2021)
7. *Harnessing education technology:* Deploy education technology to schools in the long term. This will power them up to meet the needs of educators' teaching and students' learning; otherwise, technology will risk a costly distraction. (Vegas & Winthrop, 2020)
8. *Protecting domestic and international financing of public education:* The pandemic has the power to undermine several decades of advances. National governments, international organizations, and all education and development partners must recognize the need to strengthen public health and social services but simultaneously mobilize around the protection of public education and its financing. (International Commission on the Futures of Education, 2020)
9. *Protecting the social spaces provided by schools as transforming education:* The school as a physical space is indispensable. Traditional classroom organization must give way to a variety of ways of 'doing school' but the

school as a separate space-time of collective living, specific and different from other spaces of learning must be preserved) (International Commission on the Futures of Education, 2020)

10. *Providing education in a digital world*: Online learning can take place anywhere. Improving online learning in order not to leave anyone behind is important. Online learning will help children who dropped out of the educational system to return to their learning life after the solutions to the COVID-19 problems. (Amarinthewa, 2021**;** Li & Lalani, 2020; Office of National Higher Education Science Research and Innovation Policy Council, 2020; Sylvan & Cortesi, 2021; Tam & El-Azar, 2020; Watcharasindu & Chiratrachoo, 2021)
11. *Creating learning in the hybrid classroom era and collaborating to stop using traditional teaching styles that may not be necessary and bringing the new educational innovations to use in a mixed form:* The reopening of the schools was not, of course, like the normal situation before the disease outbreak, but it was a semi-closed, semi-open school such as alternating school days to reduce congestion in schools. Nevertheless, schools had to be closed to allow students to study at home when the epidemic returned. However, online learning did not end, but became part of a new way of teaching and learning in unusual conditions. Currently, many classrooms are now hybrid classrooms with the following questions: How can a hybrid classroom that combines school learning with home screens still be effective or can use this opportunity to help students learn more? (Amarinthewa, 2021; Carvalho & Hares, 2020; Intharawiset et al, 2021; Li & Lalani, 2020; Office of National Higher Education Science Research and Innovation Policy Council, 2020; Martin, 2021; Tam & El-Azar, 2020; Watcharasindu & Chiratrachoo, 2021)
12. *Valuing the teaching profession and teacher collaboration:* There has been remarkable innovation in the responses of educators to the COVID-19 crisis, with those systems most engaged with families and communities showing the most resilience. We must encourage conditions that give frontline educators autonomy and flexibility to act collaboratively. For teachers, guiding the future of education means getting involved and advocating for their students. Teachers can't fix all their students' pandemic-related problems, but there are essential steps that they can take. (International Commission on the Futures of Education, 2020; Intharawiset et al, 2021; Western Governors University, 2021)
13. *Prioritize Tech education for teachers:* It is important to note that the COVID-19 pandemic has brought many new challenges into their lives. One of these challenges is the problem of accessing and leveraging the right technologies to deliver engaging, effective, and collaborative lectures. This is not so much a problem for younger generations of students who are, in fact, digital natives and are innately tech-savvy individuals who know how to attend classes online and participate in lectures. For older teachers, however, this can be a big challenge, which is why an emphasis should be put on making technology accessible to older generations. If teachers are to deliver quality to their students in the digital realm, then they will need to learn how to properly use various tech and even some advanced tech like VR and AR to create a more engaging classroom for all. (Andersson & Mattsson, n.d.; Nieves, 2021)
14. *Leveraging auxiliary learning platforms:* As for students, there is no denying that the COVID-19 crisis has forced them to become more creative in their learning styles and the resources they use. Given the lack of face-to-face interaction or the ability to exchange notes with their peers in person, students are now using auxiliary online learning platforms to supplement their learning. (Nieves, 2021)
15. *Weaving socialization into the online classroom:* One of the biggest challenges for educators in the post-COVID world is to mimic the kind of engagement and socialization that the physical classroom brings to students. Given the fact that schools are not just intended to teach, but also to mold children into thriving young adults, it is important not to lose this vital component of education when teaching online. One way to do this is to leverage immersive learning with advanced technologies. The other way is to focus on collaborative learning experiences and optimize online classrooms as interactive workshops for children to participate in. Of course, it's important to use both technology and advanced teaching skills to create such an immersive online space. (Nieves, 2021)
16. *Increasing emphasis on educational cooperation between the public and private sectors:* Diverse stakeholders - including governments, publishers, education professionals, technology providers, and telecom network operators – should come together to utilize digital platforms as a solution to the crisis. Rising public support should be emphasized. There is newfound public recognition of how essential schools are in society and a window of opportunity to leverage this support for making them stronger. (International Commission on the Futures of Education, 2020; Vegas & Winthrop, 2020; Intharawiset et al, 2021; Tam & El-Azar, 2020)

17. *Building resilience into educational systems:* The rapid spread of COVID-19 has demonstrated the importance of building resilience to face various threats, from pandemic disease to extremist violence to climate insecurity, and even rapid technological change. The pandemic is also an opportunity to remind ourselves of the skills students need in this unpredictable world such as informed decision making, creative problem solving, and perhaps above all, adaptability. To ensure those skills remain a priority for all students, resilience must be built into educational systems as well. (Foster, 2021; Tam & El-Azar, 2020)
18. *Promoting student, youth and children's participation and rights, and new education allies:* Intergenerational justice and democratic principles should compel us to prioritize the participation of students and young people broadly in the co-construction of desirable change. The pandemic has galvanized new actors in the community—from parents to social welfare organizations—to support children's learning like never before. The pandemic gives a chance for parents and teachers to forge stronger, more trusting relationships. (International Commission on the Futures of Education, 2020; Vegas & Winthrop, 2020)
19. *Making free and open-source technologies available to teachers and students:* Open educational resources and open access digital tools must be supported. Education cannot thrive with ready-made content built outside of the pedagogical space and outside of human relationships between teachers and students. Nor can education be dependent on digital platforms controlled by private companies. (International Commission on the Futures of Education, 2020)
20. *Expanding the definition of the right to education:* The expansion of the definition of the right to education plays an important role in creating connectivity and access to knowledge and information among learners of all ages. (International Commission on the Futures of Education, 2020)
21. *Emphasizing on Diversity, Equity, and Inclusion:* Transformative leaders in education will jump at the chance to make greater strides in diversity, equity, and inclusion. By developing the skills needed to engage with diverse audiences and stakeholders about organizational practices and theories, leaders can strategically collaborate with key partners to develop cultural intelligence, build global context, and provide support to the teachers, students, employees, and families who need it the most. Put public schools at the center of education systems given their essential role in equalizing opportunity across dimensions within society (Marymount University, 2021; Western Governors University, 2021; Vegas & Winthrop, 2020)
22. *Advancing global solidarity to end current levels of inequality:* COVID-19 has shown us the extent to which our societies exploit power imbalances and our global system exploits inequalities. We should call for renewed commitments to international cooperation and multilateralism, together with a revitalized global solidarity that has empathy and an appreciation of our common humanity at its core. (International Commission on the Futures of Education, 2020)
23. *Prioritizing Mental Health:* Responses to mental health crises are never easy, but they can often be found and implemented with confidence. Leaders who apply their vision casting, innovating, and organizational skills to find mental health solutions for their teams and students will benefit individuals, whole institutions, and systems alike. (Marymount University, 2021; Sylvan & Cortesi, 2021)
24. *Focusing on the instructional core:* Emphasize the instructional core which is the heart of the teaching and learning process. What we should do are as follows: focus on more engaging instruction, reduce silo mentality and increase more collaboration, let students choose the subjects they want to study, have fewer classes during a school day, have smaller class sizes, and cultivate digital citizenship skills. (Marymount University, 2021; Stojkovska, 2020; Vegas & Winthrop, 2020)
25. *Reducing tests and increasing practice:* Testing does not represent the students' ability at all. It usually measures how much information a person can remember or how much knowledge a person can have. This information or knowledge is possible to be forgotten in a short time. Practical learning allows us to apply knowledge and experience in real life. Practice will lead us to acquire new skills and help us to expand our knowledge. (Stojkovska, 2020, Surachet & Sanrattana, 2021)
26. *Insisting on applying knowledge in real life and giving less importance to grades*: Students have more pressure to get high grade. Eventually, grades do not represent the knowledge at all but the most important thing is to understand what to learn and how to apply knowledge in real life. (Stojkovska, 2020)

4. Methodology

This research used a policy research methodology. Majchrzk (1984 cited in Sanrattana, 2018) stated that the policy research was the process of studying the fundamental problems with a feasible, practical-oriented proposal for presenting to the policy makers for decision-making to solve such problems. In this research, the researcher has defined the research process in 2 steps as follows: the first step was to examine the documentary research to explore academic views on the trends of education after the COVID-19 situation both abroad and in the country. The second step was about mixed methods which were applied as the equivalent status design and parallel of the qualitative research, with the in-depth interview and the focus group discussion (Tashakkori & Teddie, 2009 cited in Sanrattana, 2020) to examine the results of documentary research and on the trends of education after the COVID-19 situation in Thailand. The explanations were as follows:

Step 1: Documentary research: To explore the academic perspectives related to the trends of education after the Covid-19 situation such as; Amarinthewa (2021), Andersson and Mattsson (n.d), Carvalho and Hares (2020), Foster (2021), International Commission on the Futures of Education (2020), Intharawiset et al (2021), Li and Lalani (2020), Martin (2021), Marymount University (2021), Nieves (2021), Office of National Higher Education Science Research and Innovation Policy Council (2020), Stojkovska (2020), Sylvan and Cortesi (2021), Tam and El-Azar (2020), Vegas and Winthrop (2020), Watcharasindu and Chiratrachoo (2021), Western Governors University (2021) Finally, the researcher obtained 26 proposals on the trends of education after the COVID-19 situation in Thailand. They were presented in the literature reviews.

Step 2: Mixed methods was applied as the equivalent status design and parallel of the qualitative research, with the in-depth interview and the focus group discussion to examine the results of documentary research and the trends of education after the COVID-19 situation in Thailand.

As for the in-depth interview, due to the preventive measures of the infection with COVID-19, the researcher used the Zoom Program to interview the 15 experts individually. The experts were consisted of 1) five university lecturers who teach the Educational Administration Courses, Curriculum and Instruction, Educational Technology, Educational Psychology, and Educational Fundamental; 2) two educational service area administrators, from the Office of Primary Educational Service Area and the Secondary Educational Service Area; 3) two school administrators, from the primary school and secondary school; 4) 2 teachers, from the primary school and the secondary school; 5) two parents, from the primary school and the secondary school; and 6) two local educational sages.

The researcher used the in-depth interview methods with interview schedule and used a summary of the recommendations for the trends of education after the COVID-19 situation in Thailand. The results obtained from the review of 26 issues that the researcher submitted to study 10 days in advance. The in-depth interview of each expert with the same questions such as 'Do you agree with the proposal 1, 2, 3… that considers the feasibility of action?' 'Do you have any additional proposal?' The answers from those experts were recorded and processed for the overall results of all cases later.

As for the focus group discussion, the researcher used the Zoom program to have a discussion with a new group of 15 experts and classified the data in the same way as the in-depth interviews. The proposals were concluded for organizing a post-COVID-19 education management based on 26 issues that the researcher submitted to study 10 days in advance. The discussion with a group of 15 experts used the same questions such as, 'Do you agree with the proposal 1, 2, 3… that considers the feasibility of action?' 'Do you have any additional proposal?' The answers from the focus group discussion were recorded and processed the overall results of all cases later.

5. The results

From the in-depth interviews and the focus group discussions, the experts did agree with the feasibility of applying the 26 issues proposed by the researcher after the end of COVID-19 situation in Thailand. The government and the educational personnel at the ministry level, department level, regional level, provincial level, school level,

including the private sector and all people in the society should realize the problems of education in the pandemic time and also should engage in intensive remediation to provide better quality of education and set up a crucial mission to achieve throughout the country. Apart from the 26 issues, the experts proposed 5 more important issues (No. 27-31) to be applied. Therefore, there were 31 expert proposals issues, of which 5 were added, namely:

1. Re-evaluating what matters.
2. Doing safe and uninterrupted return to school.
3. Providing Outdoor classroom as an alternative to safe and open learning.
4. Adjusting the course to open the door to the world after COVID-19.
5. Integrating online teaching and learning management of each school.
6. Providing financial support for the educational institutions and parents.
7. Harnessing education technology.
8. Protecting domestic and international financing of public education.
9. Protecting the social spaces provided by schools as transforming education.
10. Providing education in a digital world.
11. Creating learning in the hybrid classroom era and collaborating to stop using traditional teaching styles that may not be necessary and bringing the new educational innovations to use in a mixed form.
12. Valuing the teaching profession and teacher collaboration.
13. Prioritize Tech education for teachers.
14. Leveraging auxiliary learning platforms.
15. Weaving socialization into the online classroom.
16. Increasing emphasis on educational cooperation between the public and private sectors.
17. Building resilience into educational systems.
18. Promoting student, youth and children's participation and rights, and new education allies.
19. Making free and open-source technologies available to teachers and students.
20. Expanding the definition of the right to education.
21. Emphasizing on Diversity, Equity, and Inclusion.
22. Advancing global solidarity to end current levels of inequality.
23. Prioritizing Mental Health.
24. Focusing on the instructional core.
25. Reducing tests and increasing practice.
26. Insisting on applying knowledge in real life and giving less importance to grades.
27. Prioritizing the accessibility and digitalization of technology among poor students, especially in rural areas. Empirical evidence has shown that many students lacked of tools for their online study.
28. Focusing on teachers' empowerment in school because of the stress of their adaptation to the pandemic situation and their increased workloads.
29. Focusing on professional development of teachers and raise the awareness of teachers about the concept of "student achievement should be the ultimate goal of any teacher professional development activities".
30. Focusing on the review of the mission of educational management in schools. This will reduce unnecessary workload and create the new tasks for the real development of students.
31. Focusing on the communication and public relations to encourage people in the society, especially educators and educational personnel to realize the trend of education after the end of COVID-19 situation.

6. Discussion

Comparing the paradigm shift proposal from 20th century to 21st century with 31 proposals for the trends of education after the Covid-19 situation in Thailand, they are all consistent such as, from textbook-driven to web-driven, from passive learning to active learning, from classroom within 4 walls --- learners work in isolation to global classroom --- learners work collaboratively with classmates and others around the world, from time-based to outcome-based, from memorization of discrete facts to what students know, can do and are like after all the details are forgotten, from little to no student freedom to great deal of student freedom, from fragmented curriculum to integrated and interdisciplinary curriculum, from grades averaged to grades based on what was learned, from print is the primary vehicle of learning and assessment to performances, projects and multiple forms of media are used for learning and assessment, from diversity in students is ignored to curriculum and instruction address student diversity. (Tirto, 2010 cited in Sanrattana, 2013).

The researcher stated the view that the key factor led to all the proposal were digital society. Digital society is a modern, progressive society that is formed as a result of the adoption and integration of information and communication technology (ICT) at home, at work, in education and for re-creation (Lokshina, Durkin, & Lanting, 2019). Therefore, ICT which includes the internet, wireless networks, cell phones, broadcasting technologies (radio and television), and telephony and other communication mediums are the key factors for the trends of education after the Covid-19 situation in Thailand. In educational field, ICT is used to assist students to learn more effectively by providing teachers with access to a wide range of new pedagogy, and also to enable teachers to do administrative tasks more efficiently (Fleckno, 2002). However, the users must take into account especially in terms of the effectiveness of ICT. Ra (2016), the director of human and social development division, South Asia department, Asian development blog (ADB), suggested the ICT introduction for use as follows; 1) Take a holistic approach towards the development of ICT in education plans and policies. This includes support for ICT at both the national and individual school levels. This includes measures such as involving education stakeholders in how to integrate ICT skills in the curriculum, or tap teachers to help develop policy plans. 2) Build the capacity of teachers, administrators and other education leaders to use and integrate ICT in education systems. Education leaders should be provided with professional development opportunities so they can engage teachers and together demonstrate a shared commitment to ICT in education. 3) Share best practices and lessons learned among countries in Asia, and among schools within the country. This accumulated knowledge can then be used to inform the development of blueprints and tools to better support ICT in education practices. 4) Forge public-private partnerships (PPPs) and collaboration with tertiary institutions to bring in additional technical and management expertise, as well as financial resources. 'Education PPPs' combine the strengths and capabilities of both sides to ensure the sustainability and scalability of ICT in education initiatives. Governments should drive and facilitate partnerships that include attracting private sector investments on a sustained basis, and tap upon the expertise and resources of both private sector and tertiary institutions, with an emphasis on equal access to quality, ICT-enabled education. and 5) Mobilize resources for research and evaluation of ICT in education to spur innovation and scale up its use. This includes working with tertiary institutions to act as research centers. Governments can create incentives for R&D on innovative uses of ICT in education, including for instance making software and hardware more affordable and relevant for students. Rigorous evaluation studies on ICT effectiveness can provide evidence-based justification for transforming the education sector to embrace ICT.

7. Recommendations

The outbreak of COVID-19 caused difficulties for people of all sectors and of all countries in the world. We will not allow this crisis to destroy everything. We must learn how to adapt ourselves in the New Normal era in order to survive and create a better future for Thai education. All sectors must dedicate themselves to implement the new trends of education after the Covid-19 situation in Thailand. This research proposed 31 issues to be applied for these new trends. In addition, the proposals of educational paradigm shift from 20th century to 21st century are practical, effective and efficient in achieving the high impact of students' learning. To achieve the goals of education for the 21st Century, school administrators and teachers need to adapt education system, not just through a one-off reform, but continuously. They also have to change their teaching perspectives, adapt their teaching techniques to motivate students' curiosity, and implement new technology in schools. Students should be equipped with the kinds of skills that prepare them to live in and shape the society in the future. Moreover, school administrators and teachers have to seek new knowledge and apply to the new paradigm in particularly mixed teaching methods between online and onsite. The new education system will be most capable of responding effectively to the current and changing needs of young people in the society.

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