

Full-filling Innovative Leadership in Academic Administrator with Educational Engineering

Jakkrit Siririn

jakkritsiririn@gmail.com

National Interest

ABSTRACT

In the midst of the fragmentation of innovation, especially educational innovation in the 21st century, it is imperative that education administrators have to adapt to the rapid, intense and radical change. Education in the era innovation in education in the 21st century has to add new mission in innovation management collectively known as innovative leadership to be in line with the advancement of the education industry. Because at present academic administration, budget administration, personnel administration, and general administration must live innovative leadership.

For educational administrators in the age of 21st century education that requires a variety of skills in management. It is therefore essential that education administrators in the 21st century must learn about innovation and technology for application to education administration in the 21st century with educational engineering, a new line of work that will be fulfilled. Innovative leadership of school administrators to help school administrators set the direction of the institutional management with innovation that will result in the development of educational institutions in accordance with the era of education. The era of change in the 21st century effectively continues. Educational engineering is the driving force of a new line that will fill Innovative leadership of school administrators to help school administrators direct the direction of education management through innovation through the design of the educational process of the school. According to the needs of educational institutions and learners leading to efficiency and the highest achievement of educational institutions this resulted in the development of educational institutions in order to effectively conform to the changing era of the 21st century.

KEYWORDS:Innovative Leadership, Academic Administrator, Educational Engineering

Received: 28/08/2020

Revised : 08/09/2020

Accepted: 12/10/2020

Introduction.In modern times, as known as the 21st century, there have been many changes in various fields. Both of political, economic, social, especially science, and technology with leapfrog development in terms of creating various innovations to raise the quality of life and the better social quality of the world population. Whether it is information and communication technology or any other science they are constantly producing innovation, with innovation that has been spread out from science and technology circles, being further expanded and used in almost every industry especially in education circles. Schools in the 21st century are a big change in the education industry as well. With theories being published and knowledge about educational institutions management in the 21st century has been numerous continuously. One difference is obvious between educational institutions management in the 21st century and educational institutions management in the 20th century is the emphasis on skills. The skills of the 21st century is the one of which is important, learning skills.

Vijarn Panich [1] said, learning skills has transformed learning management to provide children in the 21st century with the necessary knowledge, abilities and skills. As a result of the reform of teaching and learning styles as well as various preparations although the subject matter is important but not enough for learning to live in the world of the 21st century because today learning subject matter, content or subject matter, should be a study from the students' own research by the teacher and help design activities that allow each student to assess their own learning progress.

One of the 21st century skills is the innovation skills that will determine the readiness of the learner to enter the increasingly complex world of work in the 21st century era. The 21st century is consisting of creativity and innovation, critical thinking and problem solving, communication and collaboration. Also have information, media and technology skills are equally important. The main reason is that in the 21st century there is an emergence of new media distribution channels and many new technologies, therefore, learners must have the ability to demonstrate critical thinking skills and perform a variety of tasks. By relying on various knowledge Including Information knowledge, media knowledge and technology knowledge. For educational administrators in the age of 21st century education that requires a variety of skills in management. It is therefore essential that education administrators in the 21st century must learn about innovation and technology for application to education administration in the 21st century with educational engineering, a new line of work that will be fulfilled. Innovative leadership of school administrators to help school administrators set the direction of the institutional management with innovation that will result in the development of educational institutions in accordance with the era of education. The era of change in the 21st century effectively continues.

Innovative Leadership

It is known that learning and innovation skills and information, media and technology skills are both essential skills in this age. Education in the 21st century which focuses on learning skills, one of the skills of the 21st century, especially innovation skills, which will determine the important role of the education administrators in the 21st century.

Being an innovation organization is the ability of educational institutions to innovate for development from the work process, the production of work in both management forms curriculum, media creation or teaching and learning method including measurement and evaluation to promote the learning of learners according to their potential and be competent for further study and work efficiently.

Ong-On Prachanket[2] said, that the factors affecting education innovation organization are must consist of leadership, innovative climate and innovative behavior in line with Boonkuea Kuanhavej[3] said, that the educational innovation organization means organization or institution. Education that has new actions, reconstructions, or adaptations of any kind then makes education or organizing, teaching, and learning activities more effectively than before causing the learners to change their learning. The learning was quickly, motivated to study make it effective and maximum effectiveness with learners.

Therefore, to be an educational innovation organization it is essential for education administrators in the 21st century who have to manage educational institutions in the environment of innovation in the modern era driven by modern science and technology. Especially in the education industry, which is considered are most important learning organization in society. Innovation means doing things. In new ways it can also mean a change in thinking, production, process, or organization, regardless of whether it is a revolution. Radical change or further development, which is often clearly distinguished during invention initiatives and innovation initiatives that are applied successfully, and that the new organization will be successful organizations need to have the characteristics of innovation organization, as McKeown[4] has described, innovation organization is an organization that evolves in the process of thinking in order to create something new, different and useful, is an organization that brings new changes applied until successful and spread until becoming a method of practice in societies.

Just like any other organization, an educational organization is generally successful and survive in the midst of such rapid changes in the world based on being creative discovering new things and creating innovation, as Adams et al.[5] said, educational organization is a development model from the traditional organization that emphasizes the order from top to bottom. The commander is in command and plan all the work need to change the organization to be an educational innovation organization that must develop a model of education management.

Innovative leadership is the implementation of new things or new methods to create a competitive advantage in the future, as the National Innovation Agency[6] has said that to be an innovative organization executive must truly support innovation. The path of innovation is mapped in collaboration with the organization's personnel and executives have to encourage those personnel to create innovation.

Therefore, it is imperative that education leaders must have innovative leadership to drive education organization to become educational organization in the 21st century with innovation management as the core of to manage education in the future.

Innovative Leadership of School Administrators

It is well known among education administrators. That educational administration at all levels of education has four missions which are the primary responsibility of the education administrators, namely, academic administration mission, budget administration mission, personnel administration mission, and general administration mission in line with Theera Roon-charoen [7], who said that the role of the school administrators according to the Thailand National Education Act. 1999 emphasizes the decentralization of administration. To the board and the education area office directly in 4 areas as follow 1) academic administration 2) budget administration 3) personnel administration and 4) general administration. By the mission of academic administration covering from curriculum and teaching management, quality assurance management, measurement and evaluation management, research management including academic service management. While budget administration cover from policy setting work budget plan writing follow-up work for budget requests implementation of budget disbursement, audit and budget assessment work is in line with Hoy and Miskel[8] , saying that reform-era school administrators in education must have both the science and the arts in management. This is an important feature that will enable education administration to achieve its goals. Therefore, when it comes to the characteristics of education administrators, it appears to be said a lot. This has both personal views resulting from experience in management and comes from both the study and research results of academics.

It is essential that in the age of education in the 21st century today education administrators, in addition to the four missions mentioned above, are the main roles in educational administration. Education administrators of the 21st century should review the four missions amid the radical change in the educational management environment from the 20th century. As mentioned that the mission of education administrators in all four those areas for educational administration at all levels of education which is the primary responsibility of the education administration, namely, academic administration mission, budget administration mission, personnel administration mission, and general administration mission without forgetting that today both all technology involved.

Panee Suan-Pleng[9] mentioned, the need for innovation to be used for educational administration in 3 issues as follow 1) The need for change in management processes and operations because the original information system could not provide information or work as needed in knowledge management which is a new dimension of management 2) Changes in technology due to the advancement of technology and lower prices, and 3) Adjusting the organization to create a competitive advantage.

Especially in the age of education in the 21st century mission in each area, whether it is academic administration, budget administration, personnel management, and general administration in the 21st century, e-Education innovations have been used to help in education management a lot. Education refers to information development and application. Information and knowledge to support learner-centered learning. It promotes the development and application of information and communication technology to build on and disseminate knowledge and information. Has used an Executive Information System (EIS) or a communication system via e-Mail or making documents and e-Books.

Consistent with Thaweesak Ko-anantakul[10] said, that e-Education is the application of information and communication technology as a tool in the management of education system. Starting from the recruitment process of the educational institution, such as student admissions process, registration and evaluation, curriculum and teaching work, library work, guidance work, research and development work student affairs, building work welfare and facilities work.

Educational Engineering

The concept of educational engineering is a new line of work to fill. Innovative leadership of school administrators to help school administrators set the direction of the institutional management with innovation that will result in the development of educational institutions in accordance with the era of education. The era of change in the 21st century effectively

W. W. Charters[11] said, that educational engineering is a component of two courses as follow: 1) educational courses, and 2) engineering courses that were previously in different faculties. When brought together thus, a new line of work is formed, educational engineer, which is responsible for managing innovation and technology education for educational institutions administration.

Consistent with Smith[12] who said, educational engineering is a fusion of knowledge engineering courses. With cognitive science courses to improve efficiency and effectiveness in learning which will affect learning competitiveness in terms of increasing the learning rate and the effectiveness of learning.

Just like Jozef Colpaert[13] said, educational engineering is the integration between teachers, computerize system developers, curriculum and educational designers, school administrators, educators, and researcher to create suitable classrooms.

Meanwhile, Mary F. Heller[14] states that educational engineering is collaboration between educator and engineer in designing learning management processes. To be appropriate for each learner or according to the needs of each student leading to efficiency in teaching and learning management of educational institutions.

And Greg Wilson [15] said, educational engineering is a new career. That occurred in the field of education responsible for designing the learning process according to the needs of educational institutions and learners for suitability, and the perfect balance of the school management leading to efficiency and the highest achievement of educational institutions.

In the present we can see that educational engineering is a new line of work to fill. Innovative leadership of school administrators is a fusion between educator and engineer to join together or educational engineering is a new career that exists in one person. Responsible for designing the learning management process according to the needs of educational institutions and learners to help school administrators determine the direction of the institutional management with innovation leading to efficiency. And the highest achievement of educational institutions.

Conclusion. As mentioned, education in the 21st century is a big change in the education industry because education in the 21st century is the application of educational innovation in practice. Educational is required innovation management to lead to the organization of education in the 21st century which is one of the important things of educational administration in the 21st century.

Therefore, the original mission of the education administration in all four areas is the mission of academic administration, budget administration, personnel administration, and general administration tasks therefore not enough for educational administration in the 21st century, where the atmosphere is full of innovations in science and technology.

In the midst of the fragmentation of innovation, especially educational innovation in the 21st century, it is imperative that education administrators have to adapt to the rapid, intense and radical change. Education in the era innovation in education in the 21st century has to add new mission in innovation management collectively known as innovative leadership to be in line with the advancement of the education industry. Because at present academic administration, budget administration, personnel administration, and general administration must live innovative leadership.

Educational engineering is the driving force of a new line that will fill Innovative leadership of school administrators to help school administrators direct the direction of education management through innovation through the design of the educational process of the school. According to the needs of educational institutions and learners leading to efficiency and the highest achievement of educational institutions this resulted in the development of educational institutions in order to effectively conform to the changing era of the 21st century.

References

- [1]Vijarn Panich, *Creating a Learning into the 21st century*. Bangkok: Siam Commercial Foundation,KMITL,2013
- [2] Org–Orn Prachanket, “Educational Innovation Organization New Choice of Educational Administration,” *Journal of Royal Thai Army Nurses*, Bangkok,2014.
- [3]Boonkua Kuanhavej,*Educational Innovation*.Bangkok: RS Printing,2010
- [4]M .McKeown, *The Truth About Innovation*.London: Prentice Hall, 2008
- [5]R. Adams, J. Bessant, and R. Phelps, “Innovation Management Measurement: A Review,” *International Journal of Management Review*,New York: Harper and Row,2006
- [6]National Innovation Agency, *Innovation Management For Executives*.Bangkok: Pimplak,2004.
- [7]Teera Roon–chareon,*School Administration in The Education Reform Era*. Bangkok: LT Press Company Limited,2011
- [8]W. K Hoy, C. G. Miskel, 2013. *Educational Administration: Theory, research, and practice*.9nd ed. New York: McGraw–Hill,2013
- [9]Pannee Suan–Pleng,*Information Technology and Innovation for Knowledge Management*.Bangkok:Suan Sunandha Rajabhat University,2010.
- [10]Thaweesak Ko–anantrakul,*E–Education Policy*. Bangkok: Electronic Technology Center and the national computer,2002.
- [11]W. W. Charters, “Is There a Field of Educational Engineering?,” *Educational Research Bulletin*, vol. 24, no. 2 , pp. 29–37, Feb.1945.
- [12]Karl A. Smith, *Educational Engineering: Heuristics for Improving Learning Effectiveness and Efficiency*. 1987[Online].Available [https://www.researchgate.net /publication /234729131_Educational_Engineering_Heuristics_for_Improving_Learning_Effectiveness_and_Efficency](https://www.researchgate.net/publication/234729131_Educational_Engineering_Heuristics_for_Improving_Learning_Effectiveness_and_Efficency). [Accessed: Aug. 1 ,2000]
- [13]Jozef Colpaert,*Educational Engineering and Distributed Design*.Institute for Education and Information Sciences. Universiteit Antwerpen., Belgium, 2014.
- [14]Mary F. Heller,*Educational Engineering for the Schoolroom*,2015 (Online). <https://www.tandfonline.com/doi/abs/10.1080/00220671.1939.10880877>[Accessed :Aug. 1 ,2000]
- [15]Greg Wilson, *Educational Engineering*, 2015(Online). <https://software-carpentry.org/blog/2015/12/educational-engineering.html>. [Accessed :Aug. 1 ,2000]