

Educational Management 4.0 : The Result Based Management Process To Driven A Uplifting Sustainable Education In The 21st Century

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ABSTRACT

Objective: To analyzed an educational management 4.0 on result based management process to driven a uplifting sustainable education in the 21st Century.

Methods: A mixed method research study was conducted. It involved 225 primary and secondary education area offices, and 750 samples of administrators, school directors and teachers under basic education commission office throughout Thailand. The interviews and questionnaires validated by experts and the confidence.

Findings: The findings report the needs assessment of educational management 4.0 to driven a uplifting sustainable education in the 21st century, factor of result based management process and CFA, including Sustainable education management 4.0 in response a changing global context in 21st century, along with driving mechanism that leads to practical implementation to effectiveness.

Summaries: A highly needed items of focusing students, result based management process of all factors were significant level of .01, sustainable education management 4.0 in response a changing global context in 21st century of policy and strategy and learning environment.

Keywords

Education management 4.0, result based management process, sustainable education.

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Introduction

Thailand of National strategic frameworks for 20 Years (A.C., 2018-2037) aims to stable-prosperous- sustainable economy under the development of the sufficiency Economy. Frameworks contribute to the development of happiness for Thais' and respond to achieve the national interest and Thailand was developed country. The goals for improve the quality of life, social security, equality fairness. And the education goals to the quality development and efficiency, educational and learning opportunities, Thais' attribute in Thailand 4.0 to accord the participation support for all sectors. (Office of the Education Council, 2018) For every nation, education is undeniably the key mechanism to develop, promote and embed ideas as knowledge into their citizens and society of whole. (Masintree. K, 2018) Therefore, education tends to be the core factor for country's long term competitiveness.

In this sense, the design of education is a crucial link that can lead to human and society development. One of the most important considerations in the context of modern education design is global dynamics that occurs as the world stepped into the 21st century. The impact of such transformation can be seen in various aspects ranging from society, economics, environment and politics. (Office of the National Economic and Social Development Board, 2018) An importance for science educational driven to concrete actions of the impacts to output and outcome, and

goal, vision achieves were strategic 1: fairness create of societies, strategic 2: human resource development to the lifetime learning societies for sustainable, strategic 3: create of the balances and stabilities, strategic 4: create of knowledge base economics and environmental, strategic 5: create of economics linking between the countries, stability of regional counties, strategic 6: natural resources, environments management for sustainable. Strategic development and management are preparing people, creating people, an innovation, linking access to technology and being in the change. This requires systematic management used of the education-driven planning to the successful and can be converted to the practice as a procedure for the problem solving and development, identity change include the cultural change that can propel the country to the first world of Thailand 4.0. (Thai Basic Education Commission, 2019) Education is the main mechanism of a development, supporting, cultivating ideas and knowledge to the civic community as a whole of Thailand 4.0. Is a key competency variable and long-terms potential. The design, education is the main solution of a development to be related in human and society. Key contexts of contemporary educational design to the dynamics change from the transition in 20th century to 21st century. The currents of the change have to impacted both to the social, economic, environmental, cultural and educational that the factors of transition, such as revolution "Arab Spring" through use of technology, stepping in socio-

economy include the cultural, education, management, organizing political. (Jedaman, P., Buraphan, K., and others, 2017) Educational management, it's important process and ongoing activity. Education leaders' into operations, personnel cooperate seriously to achieve the goals. Education management to relates as the development of educational quality.

A mission in all education organizations. Thai's Basic Education Commission (2019) have to the strategy setting of; (1) learners quality development in basic education, (2) opportunities, access of basic education service of thorough and comprehensive as learners to potential development and qualitative, (3) educational personnel development, and (4) management systems. Education management 4.0 were clearly define objective function of the education and make education truly national agenda that receives a supporting every party. Action agendas can then be designed accordingly to lay out strategies as well as practical, step-by-step implementation process. This study aimed to analyzed educational management 4.0 to driven a uplifting sustainable education in 21st century.

Reviews of literature

Revised National Education Plan (A.C., 2018-2037) is a master plan under the National Education. Objectives and policies (National Council for Peace and Order (NCPO), 2019) to, a) the well-round, balanced human development. The policies are to developing quality education in every levels and formats of cultivating ethics, moral and values in learners, developing the twelve core values of Thai people found in Thai university students. The twelve values consist of the following attributes, (1) upholding the nation, the religions and the monarchy, (2) being honest, sacrificial and patient with positive attitude for the common good of the public, (3) being grateful to the parents, guardians and teachers, (4) seeking knowledge and education directly and indirectly, (5) treasuring the precious Thai's tradition, (6) maintaining moral, integrity, well-wishes upon others as well as being generous and sharing, (7) understanding, learning the true essence of democratic ideals with His Majesty the King as head of state, (8) maintaining discipline, respectful of laws and the elderly and seniority, (9) being conscious and mindful of action in line with His Majesty's the King's statements, (10) practicing the philosophy of Sufficiency Economy of King Majesty. Saving money for time of need. Being moderate with surplus used for sharing or expansion of business while having good immunity, (11) maintaining both physical and mental health and unyielding to the dark force or desires, having sense of shame over guilt and sins in accordance with the religious principles, (12) putting the public and national interest before personal interest. Education should be promoted to all levels and groups of learners including poor, special abilities, disadvantage, disabilities students. Thai citizen should be promoted to serve the goal of Thailand within the high competitiveness era. The educational quality assurance system must be set to internal and external school levels. Preparation system should be redesign to produce more quality teachers and educational personnel, b) promoting Thai society to be the moral, knowledge, learning society. Thailand aims to promote

education and training of religion and social institutes and local wisdom networks. Education should be promoted in all levels and types to normal, informal and non-formal education. Education in Thailand should promote people playing sports for improving physical and psychological strengths. Must to promote research, development for building bodies of the knowledge, innovation, and intellectual properties. The management system and mechanics to developed of highest utilization of knowledge, c) developing social environment for Thai citizen and society for moral and knowledge-based society. Thailand should utilize information technology in developing quality of education and enhancing equality in education and life-long learning. Thailand must develop effective education management by decentralizing education and educational management to schools, education service area offices and local agencies. All sectors in Thai society should be invited to participate in education management and supporting educational resources and investment. Education should aim to promote internalization of education of ASEAN community and enhance the competitive ability with others and corporate with world citizen with happiness, dependency and interdependency. The strategic plan aims to promote the quality of people to be able to think, do, solve problem and think reasonably. Also, Thai's people should be responsible, discipline and fair and have moral and ethics. They should be able to utilize, blend and balance information technology and local wisdom to enhance their quality of lives. Thai society should aim to knowledge and competency-based society.

Significant a managing the paradigm-shift in 21st century of Thai's education 4.0 to developmental goal (Division of Educational Administration and Quality Assurance, 2019) of the emphasis to the knowledge, is on performance and the neglect of the paradigm shift in the management, means the failure of reform as a whole to focus on issues as, 1) social conditions in the 21st century is a high probability of entering an elderly society. This condition is caused by decreased birth rate and people are standing up. Boonbongkarn, J (2020) will affect the management of education issued to, (1) education personnel have a shortage of opportunities and the need to extend the working life of personnel, (2) educational administration needs to be designed for more adult education, and education should not stop just in school age or working age. These two issues are one of the key issues for today's executives a making to clear management plans to accommodate the changes that will occur, 2) changing people's way of life of people will change to simple observation of buying behavior in today, the internet trading has increased, to need for success and acceptance is much faster including organizational commitment to less. (Runchareon, T, 2019) it is the management challenge in organization that is conducive to full use of resources, and creating morale for talented people with long organization, 3) access to technology as become part of life in the 21st century of education 4.0, **also**, the new generation of children will be used as a learning tool, 4) diversity and conflict with the 21st century of management to need more exposure and diversity, as well as the need to create unity because the heart of success. Tatte, M. A (2015) the teamwork is an important tool in driving the goal, 5) management efficiency that new people will not stick to the

workplace, be ready to change jobs at any time and will to work more independently. Therefore, management is a key issue to the administrators for an adapting to new generation. Changes and challenges need tools that are different from the past, 6) knowledge management in organization, also, management needs to motivate personnel in the organization to develop knowledge, and innovative to the operation at all times. Because organizations must be learning organizations. (Salami, Reza and Soltanzadeh, Javad, 2017) this will help to get ready for various changes and can lead the organization into leadership of the potential and efficiency, 7) creating organizational culture in conducive to change that a change will happen quickly. UN-Habitat (2016) the organization with a work structure that is not conducive to change, this is the organization to lacking the potential into handle the problem. A creating an organization is ready for change. It is a collaboration of personnel to the time-consuming process of modifying the ideas together into the performance towards the same goal. Including the most beneficial networking. This to analyzed educational management 4.0 on the result based management process to driven a uplifting sustainable education in the 21st century.

Methodology

Goal of Contents

Needs assessment of educational management 4.0 to driven a uplifting sustainable education in 21st century to the internal factors to organization leading, strategic planning, students focusing, measurement analysis and knowledge management, personnel focusing, process focusing, results, external factors were public policy, economy, social, technology and SWOT analysis. Educational management 4.0 on result based management process to driven a uplifting sustainable education in 21st century to process factors of leadership, management, strategic planning, knowledge management, focusing student development, motivation, information system for performance monitoring, learning environment, result. Sustainable education management 4.0 in response a changing global context in 21st century of policy and strategy and learning environment in educational management 4.0.

Participants

The areas of this study as primary and secondary education area offices under basic education commission office throughout Thailand. Key informant that will be used in this study with the administrator of primary and secondary education area offices, the total number of 225 persons, they all were purposive sampling. The samples were school directors and teachers, the total number of 750 persons, they all were multistage random sampling.

Instruments

Questionnaires of current and desirable conditions, educational management 4.0 on result based management process of semi structure questionnaires, looks like a question as scale model, approximately 5-step value of 5-rating scales to consistency of the research tools and the confidence of the whole questionnaires of 0.86, 0.87, respectively. Interviews of result based management process, sustainable education management 4.0 in response a changing global context in 21st century, along with driving mechanism that leads to practical implementation to effectiveness of structure questionnaires to consistency of the research tools.

Data Collection

Respondents were asked to respond. First to survey by questionnaire of the current and desirable conditions with 750 samples for analyzed need assessment, SWOT analysis that quantitative research. Second to a review of documentary both to brainstorming and interview with 225 Key informants, take to information gained from documentary, interviews and survey to need assessment into the synthesis to factors process of result based management process, that qualitative research. Third to survey by questionnaire of educational management 4.0 on result based management process to driven a uplifting sustainable education in the 21st century with 750 samples for analyzed, CFA of factors process that quantitative research. Fourth to interview with 225 Key informants by interview questionnaire for analyzed sustainable education management 4.0 in response a changing global context in 21st century, along with driving mechanism that leads to practical implementation to effectiveness that qualitative research to the data.

Data Analysis

Qualitative data was analyzed by using three main stages, e.g., data reduction, data organization, data interpretation to conclusion. Quantitative data was analyzed by descriptive statistically analysis including mean, standard deviation, Pioneer Need Index Modified (PNI_{Modified}), SWOT matrix, including Confirmatory Factor Analysis (CFA) was conducted to analyze the factors associated with sustainable education in the 21st century.

Findings

a) Needs assessment of educational management 4.0 to driven a uplifting sustainable education in 21st century and SWOT analysis to shown as table 1, 2.

Table 1:- Mean, Std. of internal and external factors of needs assessment.

Internal Factors	Current Conditions		Desirable Conditions		Need Assessment	Priority
	Mean	Std.	Mean	Std.	PNI _{Modified}	

Planning						
1) <i>Leading organization</i>	3.61	0.74	4.71	0.62	0.23	4
2) <i>Planning strategic</i>	3.59	0.75	4.76	0.60	0.24	3
Implementing						
3) <i>Focusing students</i>	3.59	0.75	4.86	0.57	0.26	1
4) <i>Measurement analysis and knowledge management</i>	3.63	0.72	4.74	0.62	0.23	5
5) <i>Focusing personnel</i>	3.65	0.71	4.68	0.65	0.22	6
6) <i>Focusing process</i>	3.57	0.76	4.75	0.63	0.25	2
Evaluation						
7) <i>Results</i>	3.71	0.85	4.67	0.64	0.20	7
External Factors	Current Conditions		Desirable Conditions		Need Assessment	Priority
	<i>Mean</i>	<i>Std.</i>	<i>Mean</i>	<i>Std.</i>	<i>PNI Modified</i>	
1) <i>Public Policy</i>	3.73	0.81	4.63	0.72	0.19	4
2) <i>Economy</i>	3.65	0.80	4.60	0.68	0.21	3
3) <i>Society</i>	3.64	0.73	4.68	0.65	0.22	1
4) <i>Technology</i>	3.72	0.77	4.70	0.62	0.21	2

Table 2:- SWOT analysis

S-W	Strengths (S)	Weaknesses (W)
	<p>Leading organization 1) <i>Determine to expected values towards achieving the works to successful. (PNI Modified= .15)</i></p> <p>Focusing personnel 1) <i>Development and strengthening of human relations. (PNI Modified= .15)</i> 2) <i>Having a system to provide suggestions, compensation and work to support the objectives of works. (PNI Modified= .16)</i> 3) <i>Strengthening and supporting the development of competency of personnel. (PNI Modified= .17)</i> 4) <i>Allocating benefits and promoting personnel satisfaction. (PNI Modified= .18)</i></p> <p>Measurement analysis and knowledge management 1) <i>Promoting the knowledge management on continuous basis. (PNI Modified= .16)</i></p>	<p>Planning strategic 1) <i>Clearly to communicate and transfer strategies to personnel. (PNI Modified= .26)</i> 2) <i>have to operational success indicators at all levels. (PNI Modified= .25)</i> 3) <i>setting the goals consistent with objectives and measurable. (PNI Modified= .24)</i> 4) <i>planning based on information to related of problems. (PNI Modified= .24)</i></p> <p>Focusing students 1) <i>Provide educational services that meet students' expectations and needs. (PNI Modified= .26)</i> 2) <i>Facilitate students in obtaining information. (PNI Modified= .25)</i> 3) <i>Provide quick response to student comments. (PNI Modified= .24)</i></p> <p>Focusing process 1) <i>Building the networks of cooperation with communities. (PNI Modified= .27)</i> 2) <i>Inventing and developing the guidelines to support educational success. (PNI Modified= .26)</i> 3) <i>Designing curriculums and learning management to Accordance with the goals(PNI Modified= .25)</i></p>
O-T	Strengths – Opportunities (S-O)	Weaknesses – Opportunities (W-O)
	<p>Leading organization 1) <i>Determine to expected values to wards achieving the works to successful. (PNI Modified= .15)</i></p> <p>Focusing personnel 1) <i>Development and strengthening of human relations. (PNI Modified= .15)</i> 2) <i>Strengthening and supporting the development of competency of personnel. (PNI Modified= .17)</i></p>	<p>Planning strategic 1) <i>Setting the goals consistent with objectives and measurable. (PNI Modified= .24)</i> 2) <i>Planning based on information to related of problems. (PNI Modified= .24)</i></p> <p>Focusing process 1) <i>Continuously to implement of the curriculums and developing the curriculum. (PNI Modified= .24)</i></p>
T	Strengths – Opportunities (S-T)	Weaknesses – Opportunities (W-T)
	Technology is an opportunity for strengths to educational management 4.0 to driven a	Policy is an opportunity to help mitigate weaknesses to educational management 4.0 to driven a uplifting sustainable

uplifting sustainable education in the 21 st century Leading organization 1) Determine to expected values towards achieving the works to successful. (PNI _{Modified} = .15) Focusing personnel 1) Strengthening and supporting the development of competency of personnel. (PNI _{Modified} = .17)	education in the 21 st century Planning strategic 1) planning based on information to related of problems. (PNI _{Modified} = .24) Focusing process 1) Continuously to implement of the curriculums and developing the curriculum. (PNI _{Modified} = .24)
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Needs assessment of (PNI_{Modified}) a highest need at internal factors of focusing students (PNI_{Modified}= 0.26), focusing process (PNI_{Modified}= 0.25), planning strategic (PNI_{Modified}= 0.24), highest need at external factors of society (PNI_{Modified}= 0.22), technology (PNI_{Modified}= 0.21), respectively. SWOT analysis of educational management 4.0 to driven a uplifting sustainable education in the 21st century on strengths (S) were leading organization of determine to expected values towards achieving the works to successful, focusing personnel including development and strengthening of human relations, having a system to provide suggestions, compensation and work to support the objectives of works, strengthening and supporting the development of competency of personnel, allocating benefits and promoting personnel satisfaction, and Measurement analysis and knowledge management of promoting the knowledge management on continuous basis. Weaknesses (w) were planning strategic of clearly to communicate and transfer strategies to personnel, have to operational success indicators at all levels, setting the goals

consistent with objectives and measurable, planning based on information to related of problems, focusing students to provide educational services that meet students' expectations and needs, facilitate students in obtaining information, provide quick response to student comments, and focusing process of building the networks of cooperation with communities, inventing and developing the guidelines to support educational success, designing curriculums and learning management to accordance with the goals. Also, technology is an opportunity for strengths to educational management 4.0 to driven a uplifting sustainable education in the 21st century, and policy is an opportunity to help mitigate weaknesses to educational management 4.0 to driven a uplifting sustainable education in the 21st century. b) Educational management 4.0 on result based management process to driven a uplifting sustainable education in 21st century of factors and process, including Confirmatory Factor Analysis (CFA) was conducted to analyze the factors associated with sustainable education in the 21st century to shown as table 3, 4.

Table 3:-Factors and process of Educational management 4.0 on result based management process to driven a uplifting sustainable education in 21st century

Factors	Process
Leadership	1) Clearly define the values that we expect and work towards achieving results, including creating future to successful. 2) Commitment to leadership that is valuable to the students and stakeholders. 3) Ability to making decisions in problems solving of stressful situations. 4) Increasing efficiency for teamwork. 5) Implementing a thinking process to achieve of common goal. 6) Creating the competencies, skills and thinking process based on strategy for directional operations.
Management	1) Human resource development in terms of competencies, knowledge and skills in using technology in an integrated manner. 2) Organize to the process of internal a changing development and emphasize to performance through the participatory to rather than a focusing an individual performance. 3) Establish a system of action and targeted operations based on development centers. 4) Developing and training the personnel to have the expertise to perform their duties. 5) Encourage personnel to have a need to develop knowledge and create innovation in performance. 6) Change to the development method in an integrated model that can be helpful to drive in a positive and quality direction.
Strategic planning	1) Prioritize to participation from all sectors. 2) Defining vision, mission, objective and goals in all aspects. 3) Clearing the strategic to the objectives. 4) Communication and strategy a transfer to personnel of clearly. 5) Having indicators of success at all levels of operations. 6) Setting goals consistent with objectives and measurable.
Knowledge management	1) Knowledge management into an information and comparative information. 2) Promoting knowledge management towards a learning organization. 3) Having accurate and reliable information.

	<ul style="list-style-type: none"> 4) Analyzed data to monitor and evaluate operational to efficiency of the tasks. 5) Having an information system to supported operational of decisions.
Focusing development student	<ul style="list-style-type: none"> 1) Provide educational services that meet students' expectations and needs. 2) Facilitate students in obtaining information. 3) Provide quick response to student comments. 4) The promotion and development activities are consistent with potential and actual conditions. 5) Designing curriculums and learning management to accordance with the goals.
Motivation	<ul style="list-style-type: none"> 1) Establishing an incentive and rewards to achievement a driven to personnel. 2) Rewarding based on performance and ability levels. 3) Appreciation and reward when performance is a successful. 4) Creating the sectors pride into the works. 5) Stimulate a working as full potential and effectiveness.
Information system for performance monitoring	<ul style="list-style-type: none"> 1) Establishing a system to collected a systematic and comprehensive performance data. 2) Comparing performance data with the goals to lead of performance. 3) Evaluation, supervision, monitoring and auditing the performance of the works to regularly and continuously.
Learning environment	<ul style="list-style-type: none"> 1) Decision making by increasing operational power for all the personnel. 2) Building an internal and external of networks. 3) Promoting a new creativity. 4) Focusing the teamwork. 5) Exchange and learning for creating the knowledge and innovation.
Result	<ul style="list-style-type: none"> 1) Management to systematically and with the quality. 2) Educational management in all areas, and equitably to reduce inequality. 3) Curriculums, teaching and learning management, include the process to accordance with the goals that a focusing the students development. 4) Organization leadership and competencies of personnel to be effective and sustainability.

Table 4:- Variable factors of Educational management 4.0 on result based management process to driven a uplifting sustainable education in 21st century to Confirmatory Factor Analysis: CFA.

Variable Factors	Variable Observed	Standard Component Weight
Leadership	<i>Clearly define the values that we expect and work towards achieving results, including creating future to successful.</i>	0.82*
	<i>Commitment to leadership that is valuable to the students and stakeholders.</i>	0.85*
	<i>Ability to making decisions in problems solving of stressful situations.</i>	0.81*
	<i>Increasing efficiency for teamwork.</i>	0.85*
	<i>Implementing a thinking process to achieve of common goal.</i>	0.82*
	<i>Creating the competencies, skills and thinking process based on strategy for directional operations.</i>	0.85*
Management	<i>Human resource development in terms of competencies, knowledge and skills in using technology in an integrated manner.</i>	0.84*
	<i>Organize to the process of internal a changing development and emphasize to performance through the participatory to rather than a focusing an individual performance.</i>	0.82*
	<i>Establish a system of action and targeted operations based on development centers.</i>	0.86*
	<i>Developing and training the personnel to have the expertise to perform their duties.</i>	0.85*
	<i>Encourage personnel to have a need to develop knowledge and create innovation in performance.</i>	0.83*
	<i>Change to the development method in an integrated model that can be helpful to drive in a positive and quality direction.</i>	0.81*
Strategic planning	<i>Prioritize to participation from all sectors.</i>	0.83*
	<i>Defining vision, mission, objective and goals in all aspects.</i>	0.81*
	<i>Clearing the strategic to the objectives.</i>	0.84*
	<i>Communication and strategy a transfer to personnel of clearly.</i>	0.82*

Variable Factors	Variable Observed	Standard Component Weight
	<i>Having indicators of success at all levels of operations.</i>	0.85*
	<i>Setting goals consistent with objectives and measurable.</i>	0.86*
Knowledge management	<i>Knowledge management into an information and comparative information.</i>	0.81*
	<i>Promoting knowledge management towards a learning organization.</i>	0.85*
	<i>Having accurate and reliable information.</i>	0.82*
	<i>Analyzed data to monitor and evaluate operational to efficiency of the tasks.</i>	0.80*
	<i>Having an information system to supported operational of decisions.</i>	0.84*
Focusing student development	<i>Provide educational services that meet students' expectations and needs.</i>	0.84*
	<i>Facilitate students in obtaining information.</i>	0.82*
	<i>Provide quick response to student comments.</i>	0.83*
	<i>The promotion and development activities are consistent with potential and actual conditions.</i>	0.86*
	<i>Designing curriculums and learning management to accordance with the goals.</i>	0.87*
Motivation	<i>Establishing an incentive and rewards to achievement a driven to personnel.</i>	0.83*
	<i>Rewarding based on performance and ability levels.</i>	0.85*
	<i>Appreciation and reward when performance is a successful.</i>	0.82*
	<i>Creating the sectors pride into the works.</i>	0.81*
	<i>Stimulate a working as full potential and effectiveness.</i>	0.84*
Information system for performance monitoring	<i>Establishing a system to collected a systematic and comprehensive performance data.</i>	0.83*
	<i>Comparing performance data with the goals to lead of performance.</i>	0.82*
	<i>Evaluation, supervision, monitoring and auditing the performance of the works to regularly and continuously.</i>	0.81*
Learning environment	<i>Decision making by increasing operational power for all the personnel.</i>	0.82*
	<i>Building an internal and external of networks.</i>	0.85*
	<i>Promoting a new creativity.</i>	0.84*
	<i>Focusing the teamwork.</i>	0.81*
	<i>Exchange and learning for creating the knowledge and innovation.</i>	0.83*
Result	<i>Management to systematically and with the quality.</i>	0.84*
	<i>Educational management in all areas, and equitably to reduce inequality.</i>	0.82*
	<i>Curriculums, teaching and learning management, include the process to accordance with the goals that a focusing the students development.</i>	0.85*
	<i>Organization leadership and competencies of personnel to be effective and sustainability.</i>	0.86*

* p < 0.01

Educational management 4.0 on result based management process to driven a uplifting sustainable education in 21st century of factors as leadership to 6 processes, management to 4 processes, strategic planning to 6 processes, knowledge management to 5 processes, focusing student development to 5 processes, motivation to 5 processes, information system for performance monitoring to 3 processes, learning

environment to 5 processes, result to 4 processes. And the variable factors of educational management 4.0 on result based management process to driven a uplifting sustainable education in 21st century by weight of the composition of all the variables are statistically significant at a level of .01.

c) Sustainable education management 4.0 in response a changing global context in 21st century, along with driving mechanism that leads to practical implementation to effectiveness were followed:

- Policy and strategy in educational management 4.0: Create quality system by building strong and integrated foundation to enhance education, increase responsiveness to any changes in 21st century of putting more emphasis on productivity, equality and balance building. Create well-balanced and well-rounded quality citizens of assist them into finding their specialties, recognizing their own potential, thriving for lifelong learning. Sharpen management system of finding the balance between centralization and decentralization and also putting more emphasis on education management in local area. Succeed, the central government has to be the one who set the overall

framework, direction whilst local agents still possess freedom to adjust curriculum, teaching instruction according to their context.

- Learning Environment in educational management 4.0: Teaching Instruction of Teacher's holistic and unbiased management should be set as essence of classroom. Teachers should be able to choose suitable methods for their own students. Also, students should be assisted in finding their own potential, capability and drive for their passion in lifelong learning. The environment should be challenging, enjoyable with the balance between in-class, and non-class education. They must possess qualified qualities. Pedagogy education should be intensified and students should be those who are selected from cream of crop of country. Teachers' network should also be supported and developed in order to effectively serve teachers' community. Salary should also be raised to upgrade the status of profession and to attract more capable human resource. Curriculum to structure of the national curriculum should be more intensified, have strict quality control. However, core curriculum should only be framework for schools and teachers to work around and adjust to each of their own context in teaching. Most importantly, it should promote board-based and holistic learning for putting more emphasis into creating "Curriculum of Thinking". Assessment to there should be no national tests or too frequent standardized tests. Actual objective for assessment should be about evaluating each student's learning development by using formative assessment. Information and communication technology (ICT) that should be one of core factors to support student-centered environment. Adaptive usage to utilized to match each child's development at each certain age to effectively support education.

Discussions

Educational management 4.0 on result based management process to driven a uplifting sustainable education in 21st century. Also, the desirable conditions of educational management 4.0 to driven a uplifting sustainable education in 21st century of need assessment to the highly needed items of focusing students. Educational management 4.0 on result based management process of leadership, management, strategic planning, knowledge management, focusing student development, motivation, information system for performance monitoring, learning environment, and result. CFA showed all factors were significant level of .01. Sustainable education management 4.0 in response a changing global context in 21st century, along with driving mechanism that leads to practical implementation to effectiveness of policy and strategy in educational management 4.0 and learning environment in educational management 4.0. Also, Results based management of planning is a critical management function that aims to achieve an optimum balance between needs or demands and available resources. The planning process identifies the goals or objectives to be achieved, formulates the strategies to achieve them, organizes or creates the means required, establishes performance measurement frameworks as well as determining the resources required. Akpanabia, N. H (2018) the planning forms the basis of the implementation

process and directs all steps in their proper sequence. Planning, especially results-based planning is the first phase of the results-based management approach. It uses a combination of methodologies and the tools, a) planning enables an organization to set its vision, mission, goals, values and strategies for achieving results as well as the means for measuring performance, b) planning enables alignment of the objectives with organizational goals and strategies without planning the organization to achieve corporate goals and impact to the organizational mission, c) planning clarifies and outlines, d) planning helps mitigate and manage crises and ensure smoother implementation. Meksawan, T. (2016) into most organizations for a planning takes place at the corporate level as well as at the operational level. Corporate level, corporate goals and strategies are formulated in a strategic planning process of science learning management. Seng, Law Song (2017) to discussed the process and duties of organizational, education and human resource management (e.g., planning for setting goals, objectives, and strategies for implementation, organizing the personnel management, resource management to achieve work as the goals, controlling it is the duty of the management's evaluation of the review, leading for guiding, supervising to subordinates, bringing corporate plans into action, motivation is to find ways for personnel to work with peace of mind). Chinsethawong, K. (2016) a work effort, patience and direction have to achieved the goals of the educational organization on leadership, strategic management, administrators and teachers personnel, curriculum and learning management, environment and climate conducive for learning. Kanokorn Somparaj (2019) the strategic management of education as defining vision, mission, goals, strategies, setting plans, implementing plans to achieve to the objectives as leadership, strategic management, administrators, teachers personnel, curriculum, learning management, environment and climate conducive for learning. Seong, David Ng Foo (2016) the management must operate in a systematic, continuous, and interrelated manner, considered to be the heart of management to the leadership, strategic management, administrators, teachers personnel, curriculum, learning management. Randall, Lindsey (2015) performance evaluation, the management. An educational management 4.0 on the result based management process to driven a uplifting sustainable education in the 21st century of current and desirable conditions of educational management 4.0 to driven a uplifting sustainable education in the 21st century, educational management 4.0 on result based management process to driven a uplifting sustainable education in the 21st century to process factors, sustainable education management 4.0 in response a changing global context in the 21st century, a driving mechanism that leads to practical implementation to effectiveness. In educational management of education organizational the culture reflects characteristics and goals.

Summaries

Educational management 4.0 on result based management process to driven a uplifting sustainable education in 21st century to, (1) leadership to clearly define of values, creating future to successful, increasing efficiency for

teamwork, (2) management to human resource development of competencies, developing and training personnel to have the expertise, (3) strategic planning to prioritize to participation from all sectors, defining vision, mission, objective and goals, (4) knowledge management into information and comparative, promoting knowledge management towards learning organization, (5) focusing student development as promotion and development activities are consistent with potential, designing curriculums and learning management, (6) motivation for establishing an incentive, and rewards to achievement, (7) information system for performance monitoring into evaluation, supervision, and auditing the performance of the works to regularly and continuously, (8) learning environment into promoting a new creativity, exchange and learning for creating the knowledge and innovation, and (9) result for educational management in all areas, curriculums, teaching and learning management, process to accordance with the goals. Sustainable education management 4.0 in response a changing global context in the 21st century, along with driving mechanism that leads to practical implementation to effectiveness of the policy and strategy in educational management 4.0 as create quality system by building strong and integrated foundation to enhance education. Create well-balanced and well-rounded quality citizens, thriving for lifelong learning, and learning environment for teaching instruction of Teacher's holistic and unbiased management should be set as essence of classroom.

References

- [1] Akpanabia, N. H. 2018. Management approach for effective management in the 21st century. *Human Resource Management*, 52, pp. 373-375.
- [2] Boonbongkarn, J. 2020. Strategic Action Plan for Organization Development. Bangkok, Thailand: Publishing House, Teachers Council of Ladprao.
- [9] Bangkok, Thailand: Publishing House, Teachers Council of Ladprao.
- [10] Chinsethawong, K. 2016. Strategy for driving basic education to ASEAN community. *Veridian E-Journal*,
- [33] *Humanities Edition Social Sciences and Arts*, 8 (1), pp. 140-155.
- [46] Division of Educational Administration and Quality Assurance. 2019. Thailand 4.0 Driving model Thailand
- [61] towards prosperity, stability and sustainability. Bangkok, Thailand: The Office.
- [62] Jedaman. P., Buraphan. K., and others. 2017. Analysis of Sustainable Leadership for Science Learning Management in the 21st Century under Education THAILAND 4.0 Framework. International Conference for Science Educators and Teachers (ISET). AIP Conf. Proc. 1923, 030062-10; doi.org/10.1063/1.5019553.
- [63] Kanokorn Somparaj. 2019. Strategic management. Bangkok, Thailand: Success Media.
- [72] Masintree. K. 2018. Strategy and reform to Thailand 4.0. Bangkok, Thailand: Ministry of Education.
- [73] Meksawan, T. 2016. Management focuses on the results of the strategic action plan for organizational development. *Veridian E-Journal, Humanities Edition Social Sciences and Arts*, 8 (1), pp. 176-189.
- [86] National Council for Peace and Order (NCPO). 2019. Regional educational reform under Ministry of Education. Bangkok: Royal Thai Government Gazette.
- [87] Office of the National Economic and Social Development Board. 2018. The Twelveth National Economic and Social Development Plan A.C.2018-2021 (B.E. 2561-2564). Bangkok, Thailand: Office of the National Economic and Social Development Board.
- [88] Office of the Education Council. 2018. The National Education Plan A.C. 2018-2037 (B.E. 2561-2580). Bangkok, Thailand: Office of the Education Council.
- [89] Parandekar, Suhas D. 2011. "Thailand: Analysis of Efficiency of Educational Expenditures." World Bank Discussion Paper for Public Finance Management Report. Washington D.C.: Pearson.
- [90] Randall, Lindsey. 2015. Problem Solving : Away to Operation the Supervision for Process. 2nd Paper Presented at the annual Meeting of the Association of California School Administration, pp. 11-13.
- [91] Runchareon, T. 2019. Professionals in education managemet for educaitional reform for the 2nd reform and the 3rd external quality assurance. 5th ed. Bangkok, Thailand: Khawfang publisher.

- [92] Salami, Reza and Soltanzadeh, Javad. 2017. "Comparative Analysis for Science, Technology and Innovation Policy; Lessons Learned from Some Selected Countries (Brazil, India, China, South Korea and South Africa) for Other LDCs Like Iran". *Journal of Technology Management & Innovation*, Volume10, Issue 1.
- [93] Seong, Law Song. 2017. "Case Study on National Policies Linking TVET with Economic Expansion: Lessons from Singapore", Background paper prepared for the Education for All Global Monitoring Report 2017, UNESCO Publications.
- [94] Seong, David Ng Foo. 2016. "Strategic Management of Educational Development in Singapore". Background paper prepared for the Asia Education Study Tour for African Policy Makers.
- [95] Tatte, M. A. 2015. HR management in the 21st century: Challenges for future. *International Journal for Administration in Management, Commerce and Economics*, pp. 222-225.
- [96] Thai Basic Education Commission. 2019. Annual Report 2019. Bangkok, Thailand: Office of the Basic Education Commission.
- [97] UN-Habitat. 2016. Goal and Strategic Direction of the Organization. UN-Habitat Results-Based Management Handbook.