

Academic Operation Model toward Agility in Driven Education Sandbox of Schools under Bangkok Metropolitan Administration

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Abstract: This research aims to 1) to study the necessary needs in academic operation toward agility in driven education Sandbox of schools under Bangkok Metropolitan Administration (BMA). 2) to study the components, process for carry out academic, etc. 3) to develop a model for carry out academic, and 4) to evaluate academic operation model. The sample group used in the research was 29 administrators, 161 teachers, 77 school committee members, 59 parent network committee members, and 29 community representatives total 355 people. The research tool was questionnaire, interview from focus group. The results revealed that the necessary needs in academic operation towards agility in driven education Sandbox of schools under BMA in overall, it was the highest level. The components of driven academic at school consists of four areas. It consisted of 1) Participation and there are five information items. 2) Decentralization and there are three information items. 3) Teamwork and there are four information items. 4) Coordination and there are six information items. There are process according to quality cycle system (PDCA) in seven aspects namely. 1) Curriculum has eight information steps. 2) Instruction has eight information steps. 3) Innovation has ten information steps. 4) Evaluation has nine information steps. 5) Supervision has six information steps. 6) Community has eight PLC information steps. 7) Research has eight information steps. Indicators includes: 1) Indicator of Learners 2) Indicator of Teachers 3) Indicator of Schools. Evaluation results was suitability, usefulness of academic operation model. In overall was at the highest level.

Keywords: Academic operation, Driven education sandbox, Schools under Bangkok Metropolitan Administration (BMA)

Introduction

Education is an important mechanism for developing human resources in quality, potential, skills, knowledge, abilities and competencies that are ready for the changing circumstances of the world, including external pressures from globalization and domestic pressures that cannot be avoided which Thailand. The goals of educational reform include 1) Raising the education's quality 2) Reducing educational inequality 3) Focusing on excellence and build the country's competitiveness and 4) Improve the education's system more efficient in using resources. Increase flexibility to support a variety of educational arrangements. The Ministry of Education created the 2018 National Education Standards, which defines Thai people with three characteristics: 1) Learners, 2) Co-creators of innovation, and 3) Strong citizens. The 3 desired results are appropriate according to age, continuity, connected and accumulated from early childhood education, basic education, vocational education and higher education (Office of the Secretariat of the Education Council, 2018). According to the problems in the past, it found that educational reform in Thailand has encountered many problems, obstacles, and limitations. The implementation of the policy is difficult because the direction of education is constantly changing, lack of continuity. The system structure still centralizes policy, admission to educational institutions that must go to the parent, organization with a delayed bureaucratic referral. Regulations are based on document reports. Organizational culture, administrators, lack of leadership in change because they are stuck with various rules and regulations. Teachers are in thinking system stuck of framework teaching and learning that is self-centered rather than learner-centered. It said that problem information as a solution to educational reform. Independent

Commission for Education Reform. Therefore, they request support for the enactment of the Educational Innovation Area Act, B.E. 2019 (Office of the Education Council Secretariat, 2019) with the objectives: 1) Invent and develop learning and innovations to educational achievement. In order to expand the results to use in other basic educational institutions 2) Reduce inequality in education 3) Decentralize and give independence to educational agencies and pilot institutions in innovation area. To increase flexibility in administration and ensure quality and efficiency, and 4) Create and develop mechanisms for join the management between government sector, local government organizations, the private sector, and civil society. The Education Innovation Area Act 2019 has unlocked and provided freedom in 6 areas: (1) Curriculum (2) Learning media (3) Measurement and evaluation (4) Educational quality assurance (5) Personnel (6) Budget.

The BMA area that resolution was approved on December 19, 2022 for BMA. It is an area of innovation. There are 58 schools voluntarily affiliated with it as an Education Sandbox to effectively operate the innovation area of BMA. In order to efficiently carry out academic operations which is the ultimate goal of the mission in educational institutions in innovation areas. Reduce mistakes and have clear operational guidelines Reduce problems caused by not having guidelines for academic operations such as curriculum preparation, learning management, producing and using media to develop student quality as well as measurement and evaluation which will result in not achieving the goals of the Educational Innovation Area Act 2019. The researcher, as a supervisor, is responsible for the pilot school in the innovation area. therefore, sees the importance of developing academic. Therefore, an academic operating model has been developed. Towards flexibility in driven the Education Sandbox of schools under BMA. Objectives are to 1) Study the needs and necessities in carrying out academic operations to be agile in driven the Education Sandbox of schools under BMA 2) Study the components and processes in academic operations to be agile in driven the Education Sandbox of schools under the jurisdiction BMA. 3) Develop the academic operations model towards flexibility in driving the Education Sandbox of schools under BMA and 4) Evaluate the academic operations model towards flexibility in driven the Education Sandbox of schools under BMA.

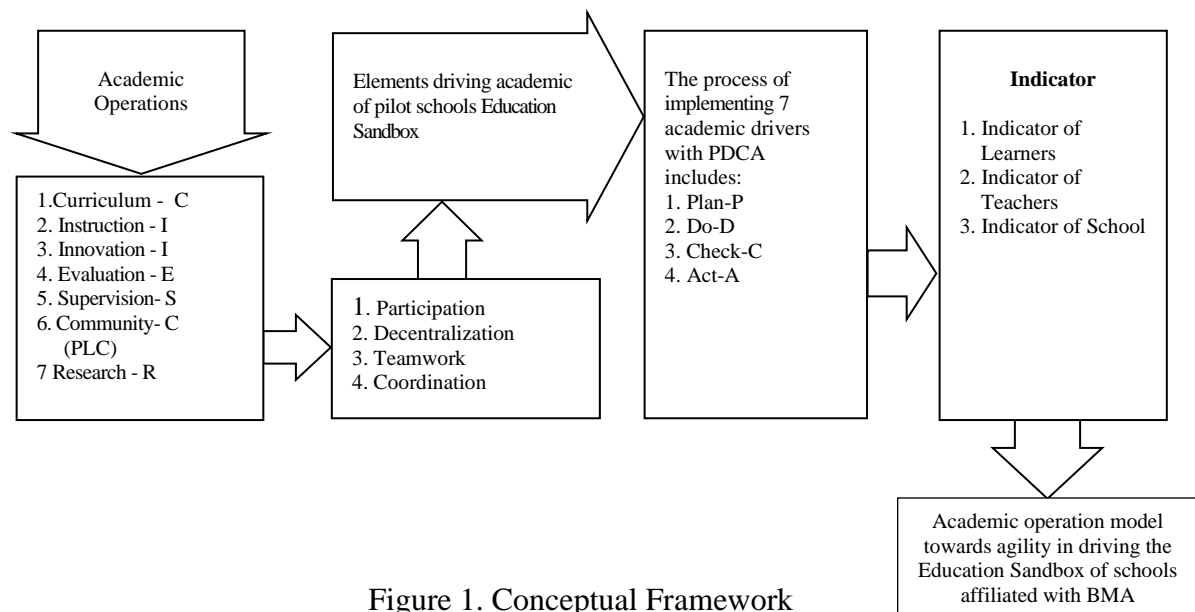


Figure 1. Conceptual Framework

Research methodology

It is mixed method research that is quantitative and qualitative research. It is divided into 4 steps as follows:

Step 1: Studying the necessary needs for academic operations toward agility in driven the Education Sandbox of schools under BMA. The researcher studied basic information of schools under BMA that applied to be pilot schools. The documents, concepts, related research are gathering to create a questionnaire on needs and necessity for academic operations.

1. The population includes schools that volunteer to be innovation area pilot schools under BMA, there are 58 schools, consisting of 136 school administrators, 2,110 teachers, 738 school committee members, 507 parent network committee members, and 198 community representatives, totaling 3,689 people. The sample group includes the number of schools that volunteer to be innovation area pilot schools under Bangkok, 50 percent equals 29 schools and uses stratified random sampling, classifying schools as large, medium, small, and setting a quota sampling of 15 percent of 29 schools using the sample size estimation criteria (Srisaat, 2017), the sample group as classified consisted of 29 administrators, 161 teachers, 77 educational institution committee members, 59 parent network committee members, and representatives community 29 people total 355 people.

2. Tools used to collect data composed of 1) Questionnaire on necessary needs for academic operations. (for school administrators and teachers) is a 5-level rating scale using the Likert method with a confidence value of 0.85, and 2) Questionnaire on necessary needs for academic operations. (For the school board Parent Network and community representatives) is a 5-level rating scale using the Likert method with a confidence value of 0.80.

3. Data collection conducted by the researcher sent both questionnaires about the needs and needs of academic operations to institutions and made an appointment to collect data.

Step 2: Study of process components in academic operations toward agility in driven the Education Sandbox of schools under BMA. The researcher studies the documents with related research on various movements of pilot schools in innovation area of Sisaket Province, Rayong Province, Satun Province, and Kanchanaburi Province. Chiang Mai Province from the website of the Educational Innovation Area Administration Office. It used the data to create an interview form those involved in the operations of pilot institutions and innovation area are currently operating.

1. Group of information providers composed of people involved with pilot schools in innovation areas Sisaket Province, Rayong Province, Satun Province, Kanchanaburi Province and Chiang Mai Province obtained through purposive selection by specifying a group of informants who have experience in academic development in pilot institutions and continuously for not less than 3 years, consisting of 10 people with authority to drive the innovation area, 5 school administrators, 5 teachers, and 5 educational supervisors, totaling 25 people.

2. The tool used to collect data is an interview form regarding academic operations in driving the Education Sandbox of the educational innovation area pilot schools. It is a semi-structured interview with an IOC of .80 or higher.

3. Data collection conducted by the researcher writes a request for assistance make an appointment for an interview regarding academic operations guidelines. Take the data and analyze the content and find common conclusions.

Step 3: Developing an academic operating model toward agility in driven the Education Sandbox of schools under BMA. The researcher created and examine the draft academic operating model as follows:

1. Draft a model for academic operations towards flexibility in driving the Education Sandbox of schools under BMA with synthesizing from related documents and results of study. The necessary needs in academic operations. Results' interviews involved in operations of pilot institutions. Sisaket Province, Rayong Province, Satun Province, Kanchanaburi Province and Chiang Mai Province prepare a framework for drafting models and create a model guideline.

2. Examining the draft academic operating model by using Focus Group and checking opinions about suitability, feasibility, correctness and usefulness of the model with questionnaire.

3. Group of information providers. They provided information in examining the draft academic operating model and obtained through purposive selection by specifying 9 experts who are members of subcommittee on promotion of academic administration in innovation areas, who have knowledge and experience in innovation areas for not less than 3 years.

4. Tools used to collect data composed of 1) Focus Group Discussion Guideline questions have an IOC value of .60 or higher and 2) Suitability questionnaire feasibility, correctness, and usefulness of the draft model It is a 5-point rating scale using the Likert method with a confidence value of 0.87.

3. Data collection conducted by the researcher schedules a date and time for the experts in the Focus Group and has the experts complete the appropriateness questionnaire, feasibility, correctness, and usefulness of the draft format Take the data and analyze it to find common conclusions from the discussion and data from the questionnaire to find the value μ and the value σ

Step 4: Evaluation of academic operating models toward agility in driven the Education Sandbox of schools under BMA. The researcher conducted the model as follows:

1. Population and sampling were the population and sampling are the same group to study and the needs and necessities for academic operations in step 1.

2. Tools used to collect data was suitability questionnaire usefulness of the academic operations model. It is a 5-point rating scale based on the Likert method with a confidence value of 0.84.

3. Data collection conducted by the researcher sent a suitability questionnaire. The usefulness of the academic operating model and give the sampling group as in step 1 and make an appointment to collect data and bring the data to find the value and S.D.

Research results

Research on academic operations models toward agility in driven the Education Sandbox of schools under BMA has the following results:

1. Results of the study of essential needs in academic operations toward agility in driven the Education Sandbox of schools under BMA, shown in the table.

Table 1. Show the necessary needs for academic operations. of schools under BMA in overall.

List	Necessity		Interpret
	M	SD	
1. Curriculum	4.57	0.42	Highest
2. Instruction	4.60	0.56	Highest
3. Innovation	4.68	0.65	Highest
4. Evaluation	4.49	0.47	High
5. Supervision	4.48	0.64	High
6. Community (PLC)	4.38	0.49	High
7. Research	4.22	0.32	High
Overall	4.56	0.51	Highest

The need for academic operations to be agile in driving the Education Sandbox of schools under Bangkok as a whole is at the highest level (M= 4.56, SD= 0.51) by Innovation is at the highest level (M= 4.68, S.D.= 0.65), followed by Instruction at the highest level (M= 4.60, SD= 0.56), and lastly, Research is at the high level (M= 4.22, SD= 0.32)

2. Study of composition and processes in academic operations to agility and driven the Education Sandbox of schools under BMA.

Study of components, processes and success indicators in 7 areas of academic operations of pilot schools by interviewing data and pilot schools in Sisaket Province, Rayong Province, Satun Province, and Kanchanaburi Province Chiang Mai Province. It found that the components driven the academic work of pilot institutions have 4 aspects, including: 1) Participation 2) Decentralization 3) Teamwork 4) Coordination. The academic process includes: 1) Plan-P 2) Do-D 3) Check-C 4) Act-A. Indicator includes: 1) Indicator of Learners 2) Indicator of Teachers 3) Indicator of School.

3. Results' development of academic operating models towards agility in driven the Education Sandbox of schools under BMA.

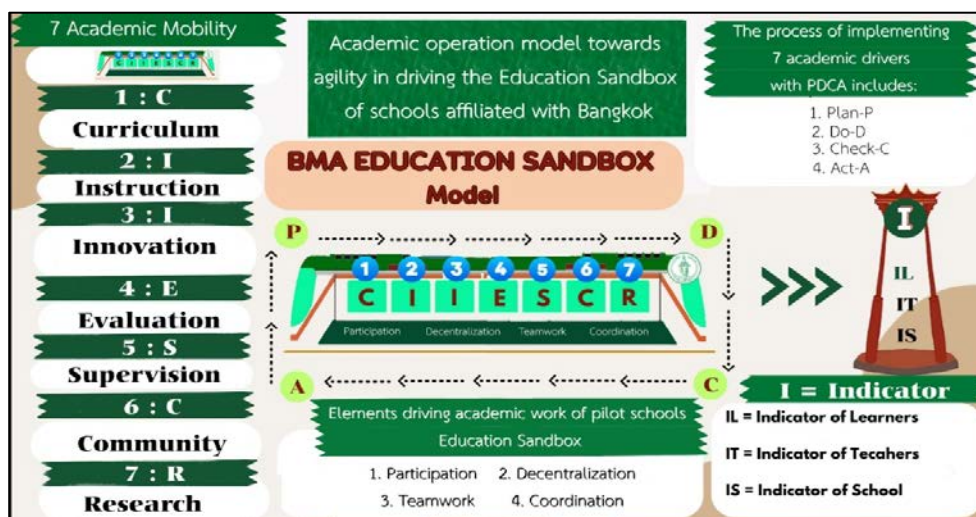


Figure 2. Academic operation model towards agility in driven the Education Sandbox of schools affiliated with BMA

From Figure 2, the operation can be explained as follows.

Table 2. Show the Academic operations model

Academic operations model	Operation details
Components for driving academic work: Education Sandbox	<ol style="list-style-type: none"> 1. Participation <ol style="list-style-type: none"> 1.1 Assign responsible person 1.2 The Office of Education strengthens and prepares educational institutions 1.3 Assign responsible persons at the school level 1.4 All involved parties promote support the creation and/or development of innovations 1.5 Educational institution management team, educational supervisors, educational institution and those involved to join as supervisors for development 2. Decentralization <ol style="list-style-type: none"> 2.1 Bangkok-level policy committee unlocks big regulations 2.2 Steering committee be the representative of local people in decision making think about how it works and create participation 2.3 Pilot schools have autonomy in academic management, budget management 3. Teamwork <ol style="list-style-type: none"> 3.1 Create understanding in driving innovation space 3.2 Appoint an academic team for the area 3.3 Integrate working together 3.4 Meeting to exchange information between affiliated educational institutions 4. Coordination <ol style="list-style-type: none"> 4.1 Together by organizing “Network partners to mobilize power to develop education management” 4.2 Meeting the working group to create an understanding of the origin, importance, and objectives of the educational innovation area 4.3 Focus on small schools by coordinating with those with specific expertise to provide knowledge Participate in problem analysis 4.4 Develop a competency-based curriculum and develop educational institution innovations together with other pilot provinces 4.5 Develop local coaches (directors, teachers, educational supervisors) and coordinate cooperation from network partners 4.6 Coordinate internally between teachers in each subject group according to the mission assigned together
The academic operation process in Education Sandbox PDCA	<ol style="list-style-type: none"> 1. Curriculum - C <ol style="list-style-type: none"> 1.1 Meeting to create awareness of educational institution curriculum development 1.2 Analyze the school context (1) school funds (2) community funds (3) weaknesses and strengths (4) needs 1.3 Define school vision, school concept, Desired Outcomes of Learning: DOL and competency 1.4 Create an educational institution curriculum that is consistent with national policy Bangkok level and reflects spatial identity 1.5 Present the curriculum to listen to opinions from students, parents, teachers, and educational personnel 1.6 Adjust the educational institution curriculum by designing the curriculum structure and a variety of learning materials 1.7 Manage and put the curriculum into practice 1.8 Evaluation of the use of the curriculum by those involved with the curriculum and teachers

Table 2. (continue)

Academic operations model	Operation details
	<p>2. Instruction - I</p> <p>2.1 Meeting to plan and drive activities to promote students to have competencies according to the school curriculum and have vocational skills</p> <p>2.2 Survey the community by visiting students' homes to find causes and problems that are factors promoting learning</p> <p>2.3 Organize teaching and learning that promotes basic literacy in 4 areas: Thai language, English, mathematics, science</p> <p>2.4 Link and integrate learning subject groups by specifying topics and innovations in organizing collaborative learning</p> <p>2.5 Apply innovations in educational management and promote wisdom in learning management</p> <p>2.6 Encourage students to learn how to search for information from many sources through various methods</p> <p>2.7 Supervise, follow up, and supervise teaching and learning and evaluate your ability to organize teaching and learning</p> <p>2.8 Analyze the evaluation results development plan and teachers' work performance</p> <p>3. Innovation - I</p> <p>3.1 Invite agencies with expertise to conduct training workshops, to develop teachers to be able to create media and innovation</p> <p>3.2 Analyze the consistency of learning media with the school curriculum appropriateness to age and interests</p> <p>3.3 There is a project to develop media and educational innovations, emphasis on media that students are exposed to. and actually practiced</p> <p>3.4 Establish a learning center to develop learners in the learning subject group in the areas of books and learning media</p> <p>3.5 Find, prepare, and purchase media and textbooks that are appropriate to your needs freely</p> <p>3.6 Create learning space both inside and outside the classroom to create a variety of learning</p> <p>3.7 Promote the use of learning resources in the community or local by setting goals length of learning</p> <p>3.8 Promote a contest for innovative teaching media for teachers and student innovation contest</p> <p>3.9 Develop a digital platform to support recording, reporting, and tracking academic results</p> <p>3.10 Study, invent, or apply innovative solutions to school learning problems that are successful</p> <p>4. Evaluation - E</p> <p>4.1 Set guidelines for evaluating students' educational achievement and ask for approval</p> <p>4.2 Create knowledge and understanding of measurement and evaluation design according to guidelines of Competency-Based Assessment</p> <p>4.3 Design measurement and evaluation that is consistent and covers basic competencies and core competencies</p> <p>4.4 Behavioral analysis to identify competencies analyze the tasks that students must complete to demonstrate competency</p> <p>4.5 Carry out measurement and evaluation to cover all 5 elements, namely measurement and evaluation according to learning content, reading measurement and evaluation think analytically and write measuring and evaluating desirable characteristics measuring and evaluating student development activities and measurement and evaluation of basic competencies and core competencies</p>

Table 2. (continue)

Academic operations model	Operation details
	<p>4.6 Prepare educational evidence documents academic report show educational qualifications and certify the student's academic performance</p> <p>4.7 Arrange for educational achievement testing according to the announcement of the innovation area policy committee</p> <p>4.8 Measure and evaluate results in relation to objectives and learning management (OLE), emphasizing formative assessment with various and continuous tools</p> <p>4.9 Continuous quality improvement by checking according to the criteria of educational quality assurance</p> <p>5. Supervision</p> <p>5.1 Provincial level committees set guidelines the agency is responsible for operations</p> <p>5.2 Arrange for a school committee and community representatives to supervise and follow up on teaching and learning arrangements</p> <p>5.3 Appoint a coaching team consisting of school administrators, educational supervisors, and academic lead teachers in the network</p> <p>5.4 Supervise, follow up, and supervise the curriculum supervise the implementation of the curriculum from the innovation space driving committee team</p> <p>5.5 There is a supervision project within the educational institution seriously continuous and operate with quality</p> <p>5.6 Educational institution committee, representatives of parents and teachers together we reflect on the school's strengths and areas that should be developed</p> <p>6. Community - C (PLC)</p> <p>6.1 Meeting to explain to teacher administrators about the purpose of work focus on student development</p> <p>6.2 Appoint an operating committee analyze data and plan and determine guidelines for PLC operations</p> <p>6.4 Drive the PLC starting from the OLE teaching planning stage</p> <p>6.5 Educational institutions regularly organize lesson-taking meetings with business establishments</p> <p>6.6 Executives study, supervise, and monitor PLC operations regularly</p> <p>6.7 Bring up PLC issues arising from the use of innovation results of using classroom research to reflect the picture of operations</p> <p>6.8 Promote a space for exchanging discussions about PLC to present a picture of success</p> <p>7. Research - R</p> <p>7.1 Organize training for teachers in conducting research in the classroom by developing research using the PLC process as a basis</p> <p>7.2 Work in research with local educational institutions by researching the development of educational innovations in educational institutions</p> <p>7.3 Teachers conduct class research from notes after teaching about developing student competencies</p> <p>7.4 Study research results from various institutions related to teaching and learning to use in educational development</p> <p>7.5 Develop Lesson Study by teachers in integrated school groups and there are network schools jointly conducting research</p> <p>7.6 Research to extract lessons from using innovation in academic administration or teaching and learning</p> <p>7.7 Supervise, follow up and evaluate the results of research to develop educational innovations and teacher learning management</p> <p>7.8 Bring the evaluation results to analyze and synthesize. and determine guidelines for research development</p>

Table 2. (continue)

Academic operations model	Operation details
Indicator	<p>1. Indicator of Learners</p> <p>1.1 Knowledge and skills</p> <p>1.1.1 Have basic literacy in all 4 areas: Thai language, English, mathematics, and science, not less than 60 percent</p> <p>1.1.2 Academic achievement in all subjects has increased</p> <p>1.1.3 Have the skills to read, write, think analytically and write there is a systematic work process</p> <p>1.1.4 Create and develop innovations to use in developing learning and working</p> <p>1.1.5 There are development results from participating in competitive activities in different arenas</p> <p>1.1.6 Get into more famous schools higher demand from schools</p> <p>1.1.7 Have career skills and entrepreneurial skills have a job and earn money while studying</p> <p>1.1.8 Have communication skills in Thai and foreign languages</p> <p>1.2 Attitude</p> <p>1.2.1 There is competency at each grade level not lower than the level that can go up</p> <p>1.2.2 Have Desired Outcomes of Education: DOE according to the criteria set by the educational institution</p> <p>1.2.3 Has four desirable characteristics according to the identity of students in the metropolis</p> <p>1.2.4 Discover yourself, know your strengths and weaknesses tell me what you like to study and how will it be continued</p> <p>1.2.5 Be strong take pride in your work, fight difficult tasks, be patient and try to do the assigned tasks until you are successful</p> <p>1.2.6 Have good physical and mental health study happily absenteeism rate decreased have a sense of local love</p> <p>2. Indicator of Teachers</p> <p>2.1 Teachers have the knowledge and ability to design teaching activities using active Learning</p> <p>2.2 Teachers understand how to encourage students to respond to changes in the 21st century</p> <p>2.3 Teachers adjust their role to be “coaches”, stimulating and inspiring introducing learning methods and knowledge creation methods</p> <p>2.4 Teachers measure and evaluate students in terms of knowledge, skills, attitudes, and competencies</p> <p>2.5 Teachers have the ability to conduct research and develop educational innovations</p> <p>2.6 Teachers have work that has been accepted at the Bangkok level national and international level</p> <p>2.7 Teachers create a positive classroom management atmosphere</p> <p>2.8 Teachers create networks to exchange knowledge for professional development</p> <p>3. Indicator of School</p> <p>3.1 There is an education development plan that is consistent with the context of education sandbox Bangkok</p> <p>3.2 Educational institutions develop learning innovations that can solve problems, and exchange of knowledge with each other</p> <p>3.3 There are classrooms and learning resources that are attractive to study by creating learning spaces to support the learning process</p> <p>3.4 The number of students coming to study in the school has increased</p> <p>3.5 There is a budget from mobilizing more resources to use in school development</p> <p>3.6 Graduating students’ young entrepreneurial skills</p>

Table 2. (continue)

Academic operations model	Operation details
	3.7 Educational institution administrators receive knowledge and competency development and experience necessary for performing duties 3.8 Cooperation network partners from all sectors take part in developing education 3.9 The educational institution passes the external educational quality assessment criteria

Suitability assessment results feasibility, correctness and usefulness of the draft academic operating model towards flexibility in driven the Education Sandbox of schools under BMA from 9 experts.

Table 3. Show the level of opinions of the experts in the appropriateness examination, feasibility, correctness and usefulness of the draft academic operating model towards agility in driven the Education Sandbox of schools under BMA in overall.

Issues in inspection	Suitability			Possibility			Correctness			Usefulness		
	μ	σ	Interpret	μ	σ	Interpret	μ	σ	Interpret	μ	σ	Interpret
1. Elements												
Driving academic work of pilot schools Education Sandbox	4.64	0.46	Highest	4.73	0.44	Highest	4.67	0.46	Highest	4.74	0.42	Highest
2. The process of implementing academic	4.65	0.46	Highest	4.75	0.43	Highest	4.84	0.35	Highest	4.83	0.36	Highest
3. Indicator	4.85	0.34	Highest	4.82	0.37	Highest	4.85	0.34	Highest	4.89	0.31	Highest
4. Model guideline	4.78	0.41	Highest	4.84	0.35	Highest	4.84	0.35	Highest	4.89	0.31	Highest
Overall	4.73	0.42	Highest	4.79	0.40	Highest	4.80	0.38	Highest	4.83	0.35	Highest

Suitability assessment feasibility, correctness, and usefulness of experts in overall, it is at the highest level in every aspect. By the aspect of usefulness has the highest average of $\mu= 4.83$ and $\sigma= 0.35$ and is followed by side of correctness. The mean values were $\mu= 4.80$ and $\sigma= 0.38$. For the feasibility aspect, the means were $\mu= 4.79$ and $\sigma= 0.40$, and the suitability aspect, the means were $\mu= 4.73$ and $\sigma= 0.42$.

4. Results of the evaluation of academic operating models toward agility in driven the Education Sandbox of schools under BMA.

Table 4. Show the suitability, usefulness, academic operations model of those involved overall.

Evaluation list	Suitability			Usefulness		
	M	SD	Interpret	M	SD	Interpret
1. Elements driving academic work of pilot schools Education Sandbox	4.69	0.55	Highest	4.76	0.52	Highest
2. The process of implementing academic	4.68	0.56	Highest	4.75	0.53	Highest
3. Indicator	4.67	0.56	Highest	4.74	0.54	Highest
Overall	4.68	0.55	Highest	4.75	0.53	Highest

Respondent opinions and benefits to academic operating models toward agility in driven the Education Sandbox of schools under BMA in overall suitability. It was at the highest level ($M = 4.68$, $SD = 0.55$) and usefulness, it was at the highest-level $M = 4.75$, $SD = 0.53$)

Discussion

1. Results of essential needs in academic operations toward agility in driven the Education Sandbox of schools under BMA, it found that those involved have overall needs and necessities. The highest level in Curriculum, Instruction, Innovation, and Evaluation, Consistent with Phuprasert (2012), Boonprasert (2014), and Rothanit (2017). The idea that academic, such as Curriculum must be organized the community and local area ag with appropriate study times. Instruction involves collecting, analyzing and teaching and activities that focus on students. Evaluation is a demonstration of development each student. Supervision is following up on teaching operations. Research develops teaching and development of teachers in solving student problems and Charoenrak (2022) studied the development of competency-based curricula in pilot institutions in innovation area under the Rayong Primary Educational Service Area Office, Area 2, it found that those involved had a necessary need to change a competency-based curriculum. It found that the students were happy and be interested in studying. Their activities because the competency-based curriculum of institutions is developed from needs. Respond to the abilities and needs of students have the freedom to design the curriculum according to the context of the institution.

2. Results of the composition study and processes in academic operations Towards flexibility in driving the Education Sandbox of schools under Bangkok It was found that the components driving the academic work of the pilot educational institutions have 4 aspects, including: 1) Participation 2) Decentralization 3) Teamwork 4) Coordination The academic process includes: 1) Plan-P 2) Do-D 3) Check-C 4) Act-A Indicator includes: 1) Indicator of Learners 2) Indicator of Teachers 3) Indicator of School Sodaelang with Poonsap (2020) studied the components of school administration in the area of educational innovation. It was found that 1) Components of school administration in the educational innovation area consist of 7 elements: innovation base management Organizational competency management Organizational partnership management Innovative leadership Innovator development Systematic innovation plan management and Phonwiang (2021) studied the mechanisms driving educational quality assurance. Of the pilot educational institutions for the educational innovation area in Chiang Mai Province, it was found that the driving directions include the development of educational quality. Educational quality inspection and assessment of educational quality

3. Results of developing the academic operating model towards flexibility in driving the Education Sandbox of schools under Bangkok.

3.1 Components for driving academic work of pilot institutions. Education Sandbox has 4 components: 1) Participation is consisting of Appointing a subcommittee to the innovation area with participation many sectors. All involved parties promote and support the creation and development of innovation in each institution the same direction. Institution management team, supervisors and those involved as supervisors to develop teaching and management consistent with Khaokhom (2014) and Kasemsuk (2014) said that Participation means cooperation in every aspect. Starting in planning, decision making, practice is receiving benefits in monitoring and evaluation 2) Decentralization is information including:

1) The BMA-level policy committee unlocks big regulations, works across departments between agencies by setting up sub-committees at the BMA level, various departments have a clear structure and operations to missions. 3) Teamwork is consisting of understanding in driving the innovation in the same direction. Appoint an academic team for the innovation area. Steering Committee Integrate work to achieve objectives, consistent with Macintyre & Salas (1995) gave the idea a team with potential needs to following things defined: 1) a team that provides advice, 2) a management team, and 3) an operations team, 4) coordination for operations, consisting of shared by establish “Partners in the network to develop management” held a working group to create an understanding origin, importance, and objectives of the innovation area. This is consistent with the Damrong Rajanuphap Institute (2010) states that coordination into account objectives, cooperation and timing to practice.

3.2 The process of implementing 7 academic drivers with PDCA includes:

3.2.1 Curriculum – C: means information such as executive meetings. Teachers and educational personnel involved to create awareness in curriculum development. Analyze the school context, school's vision, school curriculum that is consistent with the policy. Present the curriculum receives feedback that corresponding to Phuprasert (2012) gives the idea that Curriculum is a process that requires to administration, teachers, parents, and community in the preparation. To apply the curriculum with supervision and monitoring of the use of the curriculum

3.2.2 Instruction – I: means information such as planning meetings to drive activities to promote students. Visit students' homes to find causes and problems that are factors that promote learning. Teaching and learning promote basic competencies in 4 areas: Thai language, English, mathematics, science, and promotes wisdom in management. Encourage students how to search information from many sources. Supervise, monitor, and supervise teaching and learning and analyze the evaluation results development plan and teachers' performance that consistent with Phuprasert (2012), Wonganutarot (2010) said that teaching and learning are operation in institutions proceeds smoothly. and can be practiced

3.2.3 Innovation – I: means information, such as inviting agencies with expertise to attend workshops. Developing teachers and innovations. Analyze the consistency of learning media with curriculum. There is a project to develop media and innovations. Establish a learning center to develop learners in the subjects, provide, prepare, and purchase media and textbooks are appropriate to their needs. Create a learning space both inside and outside the classroom. Promote the use of learning resources in the community for innovative develop a digital platform.

3.2.4 Evaluation – E: contains information setting guidelines for evaluating students' achievement, knowledge and understanding in competency bases. Design measurement and evaluation is consistent and covers basic competencies, core competencies, behavior analysis to identify competencies. Evidence and student tests measure achievement. This is consistent with Phuprasert (2012), the Office of Academic and Educational Standards (2009), the idea that evaluation must analysis of learning standards that related to learning standards set forth.

3.2.5 Supervision – S: means information arranging for a school committee and community representatives to supervise, follow up, and appoint a team of coaches. There is a supervision project the institution with quality school board. It reflects on the school's strengths and be developed, focusing on students. Corresponding to Phuprasert (2012) said that supervision, and monitoring of academic are administrators and teachers in schools with planning and act. According to their respective roles and duties and achieve better results and academic efficiency by thinking and doing together.

3.2.6 Community – C: means a meeting to explain to administrators, teachers the objectives and new ideas. Appoint a committee analyze data and plan and determine operational guidelines. Run the PLC regularly. Promote for exchanging discussions about promoting PLC, consistent with Pichet Kasawong (2013), Nakhonsungnoen (2013) PLC is a gathering of teachers, administrators, parents, other personnel and students in doing activities or actions for the purpose of "Learning" has a cooperative organizational culture. There is teamwork, participation of all parties and members are motivated to participate in activities.

3.2.7 Research – R: has training teachers in conducting classroom after teaching, developing competencies. Research related to teaching and development, extract lessons using innovations in academic, teaching and management, supervision, monitoring, and evaluation of research to develop management. The results were analyzed and synthesized and determine guidelines and development disseminate research by teachers, administrators in the school network or various channels in accordance with the National Education Act, B.E. 2542 (Ministry of Education, 2003) Section 24 (5) that specifies guidelines for practice Develop teachers and learners by using the research process as an important aspect of learning. Develop the quality for learning and quality development. Including supporting teachers. To develop and improve the quality of institutions.

3.3 Indicator consists of learners, skills and attitudes. Basic Literacy and be increased academic achievement. Reading, writing, thinking analytically are developed innovations. There are competition results in various arenas at the BMA level. National and international level. Communication has core competencies such as communication, thinking, and teamwork strong citizenship grade level is not lower than can go up. Desired outcomes are characteristics and identity of the metropolis, self-discovery, with the concept of World - Class Standard School (Office of the Basic Education Commission, 2012) has the scope success. Emphasis effective processes. Indicator of Teachers consists of knowledge and ability, Active Learning and innovative. Demonstrate teaching roles and behaviors of teachers to "coaches", evaluating learners in terms of knowledge, skills, and attitudes with the concept of World - Class Standard School (Office of the Basic Education Commission, Ministry of Education, 2012) that has the scope of success classroom. Teachers' operations and teaching behavior and Indicator of School consist of: The institution has a development plan that is consistent with the Education Sandbox context. There is the development of innovations and resources that are worth studying. There is more budget from resource mobilization for school development. Students have young entrepreneurial skills administrators. It has developed knowledge and competencies. Cooperation network to participate in the development of education. Passed the external educational quality assessment criteria. with the concept of World - Class Standard School (Office of the Basic Education Commission, Ministry of Education, 2012) that has the scope of success at the school level.

4. Results of suitability assessment usefulness Academic operations model towards flexibility in driving the Education Sandbox of schools under Bangkok Overall, it is at the highest level in every aspect. This is because the researcher has applied the concept of model development by Willer (1968), Srisa at (2017) to discuss the process of creating or developing the model that the researcher will create or develop. The model that came up first was a model based on assumptions. By researching theories Conceptual formats that have already been developed on the same or other topics and the formats are checked according to 4 standards, consisting of Feasibility Standards, Utility Standards, Propriety Standards and Accuracy Standards, consistent with Poonsap (2020). Study the components of school administration in the educational innovation area. It was found that the results confirmed the

school administration components in the educational innovation area. accurate is appropriate possibility and helpful. For the implications of the study, the research suggests that 1) The use of information obtained from research must take into account the context of the educational institution. This is because educational institutions with different areas may have different components. Driving academic work that is different both participation decentralization teamwork and coordination. 2) Educational institutions need to analyze the school context, school funding, community funding, weaknesses and strengths, needs of students and parents to reflect spatial identity. According to the quality cycle system (PDCA) in all 7 aspects. 3) Academic operations several indicators of success must be taken into account from student level Classroom level and school level

Conclusion

Implementation of development operations efficiency. It is necessary to analyze context, funding, and community, identity, weaknesses and strengths, the needs of students and parents, must take into account several indicators. Competencies that are the sum of knowledge and attitude to student's level. The results knowledge development, teachers' skills, and organization of effective processes school level, such as results that show acceptance, trust, and faith of stakeholders and those involved in institutions There is a committee to oversee and monitor the results to develop plans at all times and achieve systematic administration in a continuous cycle.

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References

- Bangkok Metropolitan Administration. (2011). *Guidelines for quality management of schools under Bangkok academic administration*. National Office of Buddhism Printing House.
- Boonprasert, U. (2014). *School curriculum and academic administration*. SD Press.
- Charoenrak, K. (2012). Development of competency-based curriculum of educational innovation area pilot educational institutions under the Rayong Primary Educational Service Area Office, Area 2. *Journal of UBRU Educational Review*, 2(1), 15-27.
- Damrong Rajanubhab Institute Office of the Permanent Secretary, Ministry of Interior. (2010). *Cooperation Technique*. Knowledge Development and Management Section, Damrong Rajanubhab Institute Office of the Permanent Secretary, Ministry of Interior.
- Kasemsuk, J. (2014). *Creating a participatory process*. Department of Public Relations, Faculty of Communication Arts Sripatum University.
- Khaokhom, A. (2014). *Participation in educational management of parents of Sing Samut School under the Secondary Educational Service Area Office, Area 18*. [Master's thesis]. Burapha University.

- Macintyre, R. M. & Salas, E. (1995). *Measuring and managing for team performance: Emerging principles from complex environments*. In R. Guzzo & E. Salas (Eds). Team effectiveness and decision making in organizations. Jossey-Bass.
- Ministry of Education. (2003). *National Education Act 1999 and additional amendments (No.2) 2002*. Ministry of Education of Thailand.
- Nakhonsungnoen, N. (2013). *The relationship between the academic leadership of administrators and the school's learning community under the jurisdiction of the Loei Primary Educational Service Area Office, Area 1*. [Master's thesis]. Loei Rajabhat University.
- Office of Academic and Educational Standards. (2009). *Guidelines for curriculum management*. Agricultural Cooperatives Association of Thailand Printing House .
- Office of the Basic Education Commission. (2012). *Guidelines for organizing teaching and learning in schools according to international standards (revised edition)*. Agricultural Cooperatives Association of Thailand Printing House .
- Office of the Education Council. (2019). *Education innovation area act. 2019*. Independent Commission for Education Reform.
- Office of the Secretariat of the Education Council. (2018). *National educational standards 2018*. 21st Century Company Limited.
- Phonwiang, S. (2021). Mechanisms for driving educational quality assurance of pilot educational institutions for educational innovation areas in Chiang Mai Province. *Journal of Education Thaksin University*, 21(1), 51-65.
- Phuprasert, K. (2012). *Academic administration in educational institutions*. (2nd ed.). Sermsinpree Press System.
- Pichet Keswong. (2013). *Presenting guidelines for creating professional learning communities in educational institutions under the jurisdiction of the Pathumthani Primary Educational Service Area Office, Area 2*. [Master's thesis]. Phranakhon Si Ayutthaya Rajabhat University.
- Poonsap, W. (2020). *Components of school administration in the area of educational innovation*. Silpakorn University.
- Rothanit, S. (2017). *Theoretical principles and educational administration practices* (4th ed.). Phimdee Company Limited.
- Srisaat, B. (2017). *Basic research principles* (10th ed.). Suviriyasasana.
- Willer, D. (1986). *Scientific sociology: Theory and method*. Prentice-Hall.
- Wonganutarot, P. (2010). *Academic administration*. Bangkok Supplementary Media Center.