

Enhancing Thai students' core learning outcomes: An analysis of the teacher school quality program as an effective inter-organizational collaboration



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ABSTRACT

Effective inter-organizational collaboration holds paramount significance in the realm of education, profoundly impacting students' learning outcomes. Through the amalgamation of diverse organizations and resources, such collaborations foster a holistic and supportive learning environment, thereby enabling students to attain their utmost potential. This research endeavors to scrutinize the impact of the Teacher School Quality Program (TSQP) as an exemplar of inter-organizational collaboration on the core learning outcomes of Thai students. The study's cohort consisted of 290 school administrators actively participating in the TSQP initiative, selected via purposive sampling. Employing the Teacher School Quality Program (TSQP) and a meticulously designed student core learning outcome evaluation form as research instruments, the collected data underwent meticulous analysis, including percentages, mean scores, and standard deviation. The findings unequivocally affirm the Teacher School Quality Program's effectiveness as an inter-organizational collaboration that substantially enhances Thai students' core learning outcomes. These results bear profound implications for both the field of educational management and scholarly pursuits in the domain of inter-organizational collaboration. This study is a pivotal contribution to the ongoing discourse surrounding the transformation of educational paradigms through collaborative endeavors.

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1. Introduction

In the 21st-century, the flow of information and disruptive technology forces citizens of all countries to adapt and acquire specific skills to survive in a new economic system that comes with greater competitiveness in the job market. This could be both a difficulty and an opportunity for learners as they could develop their skills to gain more job opportunities in a more open market. At the same, they could be left behind if certain skills fail to be acquired (Erdem, 2019). According to P21 (P21, 2009), skills that are needed in the 21st-century include critical thinking, communication, collaboration, creativity, flexibility, initiative, social skills, productivity, leadership, Information literacy, media literacy, and technology literacy. These traits

become a challenge for learners who need to establish adaptability in learning and educators who have to take responsibility to help them cope with the challenge.

In Thailand, 21st-century skills are perceived in two aspects namely skills and characteristics. 5 qualities of analytical, thoughtful, and critical thinking and problem-solving skills, creative skills, communicative skills, career skills, and life skills are included in the skill aspects. Meanwhile, discipline, honesty, and a service mind are considered to be desirable characteristics of Thai students. These skills and characteristics are included in the core learning outcomes of Thai students, and it takes hard work and effort to develop such qualities for learners in developing countries where learning contexts and readiness for technology seem to be limited (Ghosh, 2020).

However, the core learning outcomes are not simply established in the Thai educational system. According to Prachagool and Nuangchalerm (2021), Thailand is a developing country, and it is known to have problems in terms of both skills and expected characteristics. For example, Power (2015) criticized the Thai educational system to be a passive learning

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environment where learners normally wait for information and orders from teachers. This obstructs the development of creativity and critical thinking because students lack opportunities to think and control their learning processes. Likewise, [Young \(2021\)](#) implied that Thai education misinterpreted the term discipline. Learning discipline should be defined as the way students take control of their learning in terms of responsibility, time management, and autonomy in learning. However, many times, the term was interpreted as how well students follow orders by some teachers. These problems could lead to issues in the educational setting and later develop into social problems.

With these difficulties, the collaboration of stakeholders in an educational setting is encouraged to bring in strong points of each component to solve contextual problems. At this point, inter-organizational collaboration could be formed to solve problems in Thai education and establish 21st-century skills as core learning outcomes for Thai students. According to [Schrujjer \(2020\)](#), inter-organizational collaboration could be defined as relational processes that occur when two or more legally independent entities collaborate to address their interdependencies regarding a specific problem domain. With the specific goals of development, the resources of each organization could be shared. Moreover, the management could use the advantages of each organization in solving contextual problems and encourage knowledge sharing to solve problems in other contexts ([Huxham and Vangen, 2013](#)).

As inter-organizational collaboration seems to be a possible solution to the problems of developing 21st-century skills as the core learning outcomes in Thailand, the current study employed the principle to establish an inter-organizational collaboration of 5 educational institutions in developing learners' core learning outcomes in 290 schools across the country. The purpose of the study was 1) to investigate the effect of the Teacher School Quality Program project as an inter-organizational collaboration on Thai students' core learning outcomes.

2. Literature review

As mentioned earlier, the Thai Ministry of Education interprets 21st-century skills into 5 skills and 3 characteristics. These qualities are included in the core learning outcomes expected to be acquired by school students across the country. The detail of each quality is shown below. Analytical, thoughtful, and critical thinking and problem-solving skills. The first quality of core learning outcomes is systematic thinking. Students are expected to encounter problems in life and in schools using analytical, thoughtful, and critical thinking. According to [Saleh \(2019\)](#), in the 21st-century, thinking processes are important in synthesizing the flow of data exchanged via advances in information technology. Creative skills: [Piiro \(2011\)](#) defined creative skills as the

ability to think about a task or an issue in a new or different way, or the ability to produce new ideas using the sense of creation. The 21st-century is filled with unorthodox ways of information presentation. The author also suggested that creativity helps learners in both solving problems and effectively presenting the results of the attempt.

Communicative skills: A good communicative skill enables compressible input and output exchanged between message senders and receivers ([Pattiwael, 2016](#)). In the 21st-century where people get connected, factors such as intercultural knowledge, language skills, and non-language interpretation skills are important in developing communicative skills.

Career skills: Generally, career skills can be defined as the skills that enable one to perform his/her work and career. These are in addition to the skills and technical knowledge needed to complete your job's tasks. [Eryandi and Nuryanto \(2020\)](#) suggested that career skills can be developed in schools. For example, learners can be instructed to use time management, information searching, and peer or supervisor consulting to effectively finish assignments or projects within the limitation of time.

Life skills: From a social point of view, a person also needs flexibility, initiative, social skills, productivity, and leadership in the 21st-century. [Trilling and Fadel \(2009\)](#) suggested that to succeed in career and life, learners need to develop adaptability, self-direction, and social and intercultural skills. These skills could let them live their life with purposes and conscious methods that could help them achieve their goals.

Discipline: In terms of discipline, Thai students are expected to know their duties as Thai citizens and follow the laws. Moreover, the students are also expected to take control of their learning processes. The self-discipline characteristics in learning could develop a learner to be a responsible resident in the future.

Honesty: Honesty is also needed in the influential social interaction era. The advance in information technology allows students to interact with others all the time. Therefore, they are expected to be honest with themselves and others to help make a peaceful society.

Service mind: Service mind makes society more livable. In the disruptive era, people are forced to be in a competitive world. Sympathy and service mind should be transplanted to the new generation.

It should be noted that 21st-century skills, as well as the core learning outcomes discussed in the current study, are not simply developed in school students. Factors such as learning context, technological readiness, school resources, and teacher quality are involved in the developing processes. Therefore, inter-organizational collaboration among educational institutions should be encouraged to study the nature of problems in their contextual setting, provide solutions that match the needs of the area, and share experiences to improve other learning contexts. [Schrujjer \(2020\)](#)

defined inter-organizational collaboration as a collaboration of two or more parties with a certain goal or a joint mission. Resources and personnel could be shared to operate projects that serve the interests of the participating organizations. Therefore, it could be claimed that the components of inter-organizational collaboration include shared resources of two or more organizations, shared interests, shared problems, shared benefits, and equal status of the joined organizations (Gray and Purdy, 2018; Huxham and Vangen, 2013; Bouwen and Taillieu, 2004). To illustrate, the two parties must not be in a line of command. They work together with shared goals to find solutions to problems that generally cannot be solved by a single organization, and they both gain benefits with the project finished.

Teacher School Quality Program (TSQP) is a project that allows 5 educational institutions to collaborate with the goal of developing 21st-century skills as core learning outcomes for Thai school students. The project assigns 3 universities and 2 educational foundations to investigate contextual problems of the responsible areas and to provide appropriate solutions to the problems. The experiences in each area are shared to improve the developmental processes. The projects cover 290 schools across the country and the 8 learning outcomes are expected.

The success of the inter-organization collaboration on education is evidenced in the issues of teacher professional development (Frost et al., 2009), engineering education (Gillen et al., 2021), higher education management (Nguyen, 2013), and school management (de Lima and Dâmaso, 2019). What could be noted from the results of the previous studies is that collaboration among organizations brought about both solutions to the problems and strength in organization relationships. Therefore, the Teacher School Quality Program (TSQP) was employed in the current study to let educational organizations collaborate to develop core learning outcomes for students in each area and build up the academic relationship of the joint parties. The sole research question is what is the effect of the Teacher School Quality Program project as an inter-organizational collaboration on Thai students' core learning outcomes?

3. Methodology

The participants were 290 school administrators taking part in the project. Purposive sampling was employed in the sample selection. It should be noted that administrators only took responsibility for reporting the progress of the project back to the head educational institution. All stakeholders in an educational setting took part in the project.

The instruments were the Teacher School Quality Program (TSQP) and a student core learning outcome evaluation form. The details of each instrument can be seen below. The Teacher School Quality Program (TSQP) entailed the engagement of

three distinguished universities: Khon Kane University (KKU), responsible for overseeing 60 schools; Prince of Songkla University (PSU), tasked with the oversight of 20 schools; and Sripatham University (SPU), shouldering the responsibility for 75 schools. Additionally, two educational foundations played integral roles in this initiative, with the Lamplimat Foundation (LPF) overseeing 76 schools and the Starfish Country Home School Foundation (STF) taking charge of 59 schools.

All participating institutions embraced a comprehensive educational approach grounded in several fundamental principles, including: 1) the pursuit of educational excellence, 2) fostering a professional learning community, 3) leveraging multimedia resources for educational advancement, 4) enhancing pedagogical competence, and 5) fostering extensive networks and collaborative partnerships. The program was underpinned by four essential processes, namely: 1) adaptive learning management, 2) equitable student development, 3) professional development for educators, and 4) active community participation in the cultivation of core learning outcomes. In the context of innovation, subsequent to rigorous problem analysis, a series of innovative solutions were introduced to address identified challenges and enhance the educational landscape. According to Table 1, the student core learning outcome evaluation consists of 16 question items related to the 8 qualities of the core learning outcomes. The items were designed in 5 Linkert scales. The form was employed before and after the project to evaluate the effectiveness of the project. The data were analyzed using percentages, mean scores, and standard deviation.

Table 1: Innovations used in each responsible area

Institutions	Innovations
Khon Kaen university	Lesson study and open approach
Prince of Songkhla University	Active learning Research-based learning
Sripatham university	High-functioning classroom and innovative learning
Lamplimat foundation	Problem-based Learning: PBL Professional learning community: PLC
Starfish Country Home School Foundation	STEAM design process

4. Results

According to the findings presented in Table 2, the study reveals that, prior to the implementation of the program, the overall learning outcomes of students across the 290 participating schools were situated at an average level, denoted by a mean value of 3.32. In contrast, following the program, these learning outcomes exhibited a marked improvement, reaching a high level with a mean value of 4.27. When considering specific skills, a similar trend emerges: the initial overall learning outcome of students was characterized as average, with a mean score of 2.9, while after program completion, it ascended to a high level with a mean score of 4.05. A parallel pattern is observed in terms of students'

characteristics, with pre-program learning outcomes averaging at 3.37 and post-program outcomes rising significantly to 4.3. Furthermore, a detailed analysis demonstrates that all schools under the purview of participating institutions benefited from the program. For instance, in schools overseen by Khon Kaen University (KKU), the pretest overall learning outcome stood at 3.45, ascending to 4.17 in the posttest. Similarly, schools under the jurisdiction of Prince of Songkhla University (PSU) exhibited a pretest mean score of 3.42, which subsequently increased to 4.14 in the posttest. Furthermore,

schools affiliated with Sripatham University (SPU) showed an increase from 3.34 to 4.29, while those associated with Lamplaimat Foundation (LPF) improved from 3.15 to 4.3. Lastly, schools under the aegis of Starfish Country Home School Foundation (STF) progressed from a pretest mean of 3.35 to a posttest mean of 4.37. These results collectively suggest that the Teacher School Quality Program (TSQP) effectively contributed to the enhancement of learning outcomes, particularly in terms of essential skills and characteristics essential for success in the 21st-century.

Table 2: The effects of TSQP on Student core learning outcomes

Qualities	Institutions in the teacher school quality program (TSQP)										Overall	
	KKU		PSU		SPU		LPF		STF			
	Pre(\bar{x})	Post(\bar{x})	Pre(\bar{x})	Post(\bar{x})	Pre(\bar{x})	Post(\bar{x})	Pre(\bar{x})	Post(\bar{x})	Pre(\bar{x})	Post(\bar{x})	Pre(\bar{x})	Post(\bar{x})
Skills	2.94	3.91	2.88	3.85	2.95	4.11	2.74	4.06	2.99	4.18	2.9	4.05
Systematic thinking	2.82	3.86	2.63	3.75	2.79	3.95	2.6	3.93	2.89	4.08	2.75	3.94
Creative skills	2.79	3.93	2.76	3.7	2.73	3.94	2.51	3.91	2.91	4.15	2.72	3.96
Communicative skills	2.84	3.85	2.92	3.97	2.96	4.09	2.79	4.08	2.85	4.03	2.87	4.02
Career skills	2.97	3.79	2.92	3.75	3.11	4.26	2.81	4.06	3.06	4.25	2.98	4.08
Life skills	3.28	4.14	3.21	4.07	3.17	4.33	3.02	4.31	3.26	4.4	3.17	4.28
Characteristics	3.51	4.2	3.48	4.17	3.39	4.31	3.19	4.33	3.39	4.39	3.37	4.3
Discipline	3.4	4.14	3.34	4.17	3.24	4.17	3.07	4.32	3.27	4.31	3.24	4.23
Honesty	3.54	4.17	3.42	4.1	3.39	4.31	3.21	4.27	3.34	4.38	3.37	4.27
Service mind	3.59	4.3	3.68	4.25	3.54	4.45	3.31	4.4	3.56	4.49	3.5	4.4
Overall	3.45	4.17	3.42	4.14	3.34	4.29	3.15	4.3	3.35	4.37	3.32	4.27

Moreover, the qualitative data indicate factors leading to success in developing students' core learning outcomes. The issues summarized from the data can be seen below.

The management: The results of the study indicate that management played an important role in the success of the project. They led the schools in the program which allowed personnel to learn with scholars from the institutions in the program. Moreover, administrators provided resources that support the processes of inter-organizational collaboration which led to knowledge transference and the improvement of students' skills and characteristics.

Leading institutions: The 5 institutions taking part in the projects were also reported to be significant for the development processes of students' core learning outcomes. The interviewees reported that new knowledge was transferred effectively by personnel from the leading institutions. They also followed the development of each school regularly which stimulated the participation of teaching staff and administrators.

Teaching staff: Teachers also played a crucial role in taking policy into action. Adaptability was found in the teaching process. This signifies the quality of teachers who can effectively use the body of knowledge gained from the leading institutions to teach students, and it is evidenced by the improvement of the students' core learning outcomes.

5. Discussions

The results of the study indicate that inter-organizational collaboration could bring about

success in developing students' core learning outcomes. The results confirm the benefits of the education method and the studies supporting inter-organizational collaboration (de Lima and Dâmaso, 2019; Frost et al., 2009; Gillen et al., 2021; Nguyen, 2013). In this study, even though the joined organizations employed different instructional approaches in the schools in their responsible areas, the processes of inter-organizational collaboration allowed them to share ideas and exchange comments to improve the developmental process of the project. This results in the core learning outcomes which should help students cope with the obstacles brought by the 21st-century.

It is noteworthy that the instructional approaches used by the joined organization in the projects need the participation of stakeholders in an educational setting to be utilized effectively. For example, the professional learning community (PLC) employed in the case of Lamplaimat Foundation relies on the collaboration among teaching staff, administrators, families, and communities to drive a project. In this case, the results of the study indicated that the success of the project was due to the participation of school administrators, teaching staff, and scholars from the leading institutions. To develop the education system as a whole, personnel from policymakers to practitioners should work in the same direction with clear goals and systematic management (Hord, 1997). It should be noted that the ultimate goal of education is to let learning grow properly.

It can be seen in the results of the study that 21st-century skills are challenges faced by Thai educators. The evaluation of the core learning outcomes that indicate problems among students across the

country is consistent with Ghosh (2020) who also claimed that 21st-century skills could be a great challenge for developing countries where the disparity in learning is severe. It also confirms Prachagool and Nuangchalerm (2021) who also claimed that the 21st-century would significantly affect Thai education due to learning culture, infrastructures, and chronic problems in the system itself. Therefore, educational institutions in the country should work together to support educational growth.

6. Conclusion

The results of the study could be summarized that the Teacher School Quality Program proved to be an effective inter-organizational collaboration that could develop Thai students' core learning outcomes. The results of the study could be implicated in education management as policymakers in other countries should encourage the processes of inter-organizational collaboration in developing education systems. Moreover, scholars who seek to study inter-organizational collaboration in education could look at other skill sets in the 21st-century such as literacy, digital literacy, and technology skills. Collaboration of related organizations might lead to the development of the skills as it occurred in the current study. However, it should be noted that the current study employed a rating scale as a self-report of school administrations regarding the effect of the instructional approach used in the project. This is to illustrate the broader picture of how the method affects an educational system as a whole. To study the effectiveness of each approach on students' behaviors, the assessment might focus on students' knowledge and performance. Therefore, further studies might employ tests or behavior observation forms with less amount of student participants.

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Compliance with ethical standards

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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