School Management Factors Affecting Student Quality: A Case Study of the Thai Triam Udom Suksa Pattanakarn School Group

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The research objectives were to study the factors of school management and their guidelines that affect learner quality. The sample was drawn from one of Thailand's 19 Triam Udom Suksa Pattanakarn (TRIAMPAT) group schools which have an enrollment of 30,644 students and 1,404 educators. Using a mixed research methodology and stratified random sampling 246 teachers and administrators were selected from 1,404 educators. This included 19 school administrators, 56 deputy administrators, 19 academic supervisors, and 152 teachers from eight learning groups. Descriptive statistics included the percentage, mean, and standard deviation used. Stepwise multiple regression and content analysis were also used. The results revealed that two factors affect institutional management and have a statistically significant effect on learner quality. These were the learning resource, media, technology, innovation, and research (x_5) factors and the curriculum and teaching-learning system (x_6) factors at the 0.01 level, with a predictive coefficient (R^2) of 0.35. This indicates that x_5 and x_6 together predicted the quality of learners in the TRIAMPAT school group by 35%.

Keywords: Chulalongkorn University, OBEC, preparatory school, Thailand, TRIAMPAT

INTRODUCTION

The *Triam Udom Suksa Pattanakarn* (TRIAMPAT) beginnings can be traced back to 1938, when its founding school (Triam Udom Suksa) was created as a prep school for Thailand's prestigious Chulalongkorn University. Located in central Bangkok (Upadhya & Lynch, 2019), the school grew to become one of the best secondary schools in Thailand, admitting upper-secondary (Mathayom 4-6) students in grades 10-14 with the largest yearly enrollment in Thailand. However, on February 21, 1978, Thailand's Ministry of Education (MOE) announced the formation of the Triam Udom Suksa Pattanakarn School (TRIAMPAT), formerly known as the Triam Udom Suksa 2 School.

The MOE's announcement allowed the increase in its enrollment by opening up more grades to students (1-12), which has, over the years, consistently been in the top three Thai secondary schools sending students to universities with the highest scores from national testing. Today, the TRIAMPAT School has approximately 5,000 students and 200 teachers (Upadhya & Lynch, 2019).

Today, nineteen schools in the TRIAMPAT group share a common philosophy, mission, and objectives. Stated goals include academic excellence and morality, aiming to develop each school's learners

to achieve higher academic scholarship. The campus of schools under the TRIAMPAT banner also has four stated missions/objectives. These include 1) developing learners to achieve higher academic achievement by 3%, 2) promoting learners to have nine desirable characteristics, 3) developing teachers to have knowledge and ability to manage learning and development of academic performance, and 4) promoting relationships and development among the TRIAMPAT schools which in turn helps in the cooperation harmonization of a common culture, academic achievement, good moral values, and creative activities. The 3% goal is further specified as all students within all TRIAMPAT group schools increasing their academic performance by 3% using the Ordinary National Educational Test (O-NET) and the academic achievement scores from each of the eight learning areas in the current school year compared to the previous year.

However, academic achievement within the TRIAMPAT group can be influenced by several factors. Also, student quality is an essential indicator of educational quality, with lifelong learning abilities now expected as part of an institution's essential roles. Hord (1997, 2008) has also added that a school's purpose is student learning, which is accomplished through the quality of teaching. These ideas are consistent with other authors who have stated that learning, innovation, media, knowledge, and technology are essential factors in developing a knowledge society, which allows for the creation and promotion of lifelong student learning (Hannafin et al. 2009).

These ideas are consistent with the goals outlined in various Thai government documents and five-year plans. This includes the '*Skills Framework Development for Basic Education*' (Buasuwan et al., 2021), which outlines how young students should be prepared to meet the global challenges and demands of the 21st century. Moreover, five additional core competencies were identified under the *Thai National Strategy* (2018-2037) plan and the *National Education Standards*. These included the capacity to communicate, thinking abilities, problem-solving skills (PSS), life skills application, and applying information communication technology (ICT) and digital technology (Rodrangsee & Tuntiwongwanich, 2021).

Schools are also expected to provide the tools and abilities for their learners to acquire 21st-century skills (Moto et al., 2018). The Thai MOE has also mandated that students be conscious, have intelligence, have competence, are ethical, and responsible to their families and their nation.

However, all these aspects require educators and their students to keep abreast of technological changes and how knowledge is acquired. The COVID-19 global pandemic also accelerated changes in how teaching and learning take place, moving education from traditional classrooms to online environments using a wide variety of learning pedagogies such as blended learning and flipped classrooms (Banyan et al., 2016; Pipitgool et al., 2021; Siripongdee et al., 2021). Under this '*New Normal*,' a massive transformation in how education is delivered and managed has taken place, with questions concerning how public and private schools meet the required quality standards becoming ever louder.

Educational institutions are, therefore, the primary units for developing learners' learning quality. For learners to have quality standards set by national educational agencies, various factors must be considered and implemented. For learner quality, factors such as academic leadership, teacher characteristics and abilities, teacher knowledge, teaching methods, assessment methods, learner support, and learner support and fairness should be considered.

In other cultures, Farooq et al. (2011) felt that secondary-level student learner quality was rooted in family status and the parent's education. Interestingly, parent job status affected female learners more than male learners. The researchers also stated the importance of school administrators and their ability to play a part in improving learner quality by understanding student views and differences as a primary focus can improve students' quality of education.

Therefore, the researchers set a goal to study how learner quality can be improved within the TRIAMPAT -affiliated preparatory schools operating under guidelines set forth by Thailand's Office of the Basic Education Commission (OBEC). This study also intends to assist in guiding TRIAMPAT group school administrators' management skills to raise students' quality.

Research Problems

Several issues were identified from the analysis of school management that could affect student quality. These were teacher quality and performance, executive leadership and performance, student readiness, and

each school's atmosphere and environment applied to learning resources, media, technology, innovation, and research. Other considerations included the curriculum and teaching system and the network of cooperation and support from the learners' parents.

Objectives of the Research

1. To study factors related to school management that affect learners' quality within the 19-school TRIAMPAT School group operating under regulations set forth under Thailand's Office of the Basic Education Commission (OBEC).
2. To study the educational management guidelines that promote learners' quality in schools within the 19-school TRIAMPAT School group operating under regulations set forth under Thailand's Office of the Basic Education Commission (OBEC).

Research Hypothesis

At least one school management factor affects the quality of learners in schools within the 19-school TRIAMPAT School group.

LITERATURE REVIEW

Factors Affecting the Quality of Learners

In Thailand, multiple studies over the years have pointed out that two of the most significant challenges to student quality are the system's poor quality of education and educational inequality (Wittayasin, 2017). Recently, these challenges have been addressed under what is now referred to as Thailand 4.0, which is an outline of national objectives to establish a sustainable Thai society, increase social equality, develop citizen analytical thinking skills (ATS), innovation, open-mindedness, and society fellowship (Changwong et al., 2018; Wittayasin, S. (2017).

Unfortunately, multiple studies and observations from teachers have found that in Thailand, numerous challenges exist in meeting these goals and other 21st-century student skills. These include teaching and learning challengers with ATS, critical thinking skills (CTS), computational thinking (CT), and problem-based learning (PBL) skills (Aumgri & Petsangsri, 2019; Hutamarn et al., 2017; Meepung et al., 2021). It has also been noted that ICT student use has no significant effect on educational outcomes unless tailored to educational proposes (Srijamdee & Pholphirul, 2020).

In another study from Thailand, Ketkajorn et al. (2017) analyzed 1,128 school administrators' opinions on the effectiveness of educational quality assurance. The researchers reported that human resources, leadership, and teamwork played essential roles. This is consistent with an OECD report in which school leadership has become a global educational priority due to greater school autonomy and a greater focus on schooling and school results (Beatriz et al., 2008).

Similarly, Lunenburg and Ornstein (2012) believed five elements contributed to learner quality. These were learning management and readiness, learner promotion policies, media support and learning resources, and parental support. In northeast Thailand, Mongkhuntod (2020) also determined that the factors affecting student quality were teaching management, learner readiness, learner promotion policy, media support and learning resources, and parental support.

Therefore, seven reoccurring themes were identified as factors affecting student quality. These seven factors are outlined in the following:

Teacher Quality and Performance

Improving the learning quality of learners and their potential rests on the shoulders of their teachers, who remain the most crucial person in the educational development process. This is because learners' quality depends on their teachers' quality.

In Australia, Churchward and Willis (2019) investigated student-teacher readiness along with dropping scores in student performance. The authors said that definitions of 'quality teaching' were vague and needed to be better defined. In Nigeria, Saleman et al. (2019) felt that teacher empowerment and quality were the

critical factors to student academic performance improvement. However, principal empowerment was found to be unimportant to student quality.

In the United States, an examination of teachers and administrators in the Los Angeles Community College District found significant agreement between teachers, administrators, and students that student quality was associated with teaching effectiveness and professional and personal traits (Calderon, 1989). Finally, Lunenburg and Ornstein (2012) stated five factors affecting learners' quality. These were teaching management, student readiness, student promotion policy, media and learning resources support, and support from parents.

Executive Leadership and Performance

The concept that a teacher is a leader is far from new, with a wealth of information and studies supporting leadership's pivotal importance in the classroom and illuminating how teachers actively contribute to their school and system change (Campbell, 2015). Moreover, according to Nguyen et al. (2019), extensive global evidence confirms the importance of teachers being leaders within and beyond their classrooms.

This is consistent with Beach and Reinhartz (2000), who have said that leadership is the behavior of a person who directs a group's activities towards a given goal. Yukl (2002) states that leadership is a process of influencing another person by making the other person accept and agree with whatever needs to be done and how to implement practical actions to achieve goals. This is consistent with Hersey et al. (2013), who argue that leadership influences others to follow to achieve goals, and the number one reason individuals stay with an organization is because of good leadership, and the number one reason they leave is because of bad leadership. Leadership even overrides reasonable compensation and benefits, say the authors.

Concerning education leadership, Pont (2020) has noted that it is often indirect but contributes to productive environments. Once again, Pont (2020) details a wide array of opinions and policies concerning 'good' school leadership, depending on where the school is. Also, terms used to describe a school leader and its staff and students go by various names, including head teacher, school administrator, and school principal. In Europe, it is common practice to divide leadership tasks among multiple individuals who organize the scheduling, curriculum implementation, outside activities, testing, and teacher evaluation. It is also expected that these 'leaders' have financial responsibility and sometimes take on teaching duties (Eurydice, 2013).

Learner Readiness

Readiness is one of the most essential elements of learning. It is a state in which a person is equipped with all things to do the most complete ready to study physical, intellectual, emotional, and social readiness to a level of practicality combined with basic knowledge (Dangol & Shrestha, 2019). Learning readiness is the degree of eagerness and concentration to learn among students.

In Thailand, Chorrojprasert (2020) believes that when embedded within instruction, learner readiness can help enhance learner skills and abilities. Other studies have detailed the relationships between learner readiness and student autonomy, learner self-efficacy, and self-directed learning (Bozkurt & Arslan, 2018; Hsieh & Hsieh, 2019; Kartal & Balcikanh, 2019). Sinclair and Hanks (1991) defined readiness as a person's preparation to accomplish a specific goal and willingness or enthusiasm to perform a specific activity.

It can be concluded that learners' readiness means they are in good health, have emotional maturity, can adapt and live in society, think critically, and make decisions to solve problems appropriately for the situation.

The School's Atmosphere and Learning Environment (LE)

Providing an appropriate atmosphere and environment will enhance opportunities for learners to access quality materials, technology, tools, and learning resources, make students concentrate on learning, and help inspire students to attend school. A good learning environment creates a good atmosphere for learning which facilitates effective teaching and learning (Paul & Devarapalli, 2018). Also, the classroom's physical environment should be fostered as it plays an essential role in developing student behavior and creating a

happy learning atmosphere. The environment should also make it easy for students to work while promoting their social, mental, physical, and emotional well-being (Paul & Kumari, 2017).

Furthermore, the primary elements of the LE are the psychological, social, cultural, and physical settings in which learning occurs. These affect a student's motivation and success (Rusticus et al., 2022; Lin et al., 2018; Vermeulen & Schmidt, 2008). Other studies point out that effective LEs increase academic performance (Lizzio et al., 2002; Rusticus et al., 2014), emotional well-being (Tharani et al., 2017), and less burnout and stress (Dyrbye et al., 2009). In conclusion, an appropriate school atmosphere and learning environment mean that the school has an atmosphere conducive to learning.

Learning Resources, Media, Technology, Innovation, and Research

In Thailand, educational leaders have a fast-growing awareness of the critical nature of teachers developing their ICT skills on their own and developing their online assessment processes (Ruenphongphun et al., 2021). Moreover, teaching systems must be developed that assist learners in gaining new skills in learning and using new technology, particularly for bringing 21st-century skills into the school (Tiantong & Siksen, 2013).

This is consistent with mandates from multiple Thai government agencies over the past years for programs to develop student media, information, and ICT literacy skills (Moto et al., 2018). Initiatives such as the *Information and Communication Technology Policy Framework (2011-2020)* and the Thailand ICT framework (ICT2020) for the Kingdom's Internet and ICT development (ICTPF, 2011) have been ongoing projects. These programs have evolved in the *Smart Thailand 2020* strategy, which makes ICT and the Internet the pillars for improving the nation's life quality, economy, and mobile penetration. Newer Thai government initiatives where digital technologies, Internet connectivity, and infrastructure improvements are highlighted include the *Digital Economy Master Plan* (DEMP), and the MOE's late 2020 announcement for the *Thailand Education Eco-System* (Mala, 2020). These were followed by the cloud-based and AI-powered *Human Capital Excellence Center* (HCEC), the *Digital Education Excellence Platform* (DEEP), and the *Excellence Individual Development Plan* (EIDP) to improve the education system. *DEEP* is designed for remote learning wherein rural learners can access Google and Microsoft learning tools, English language courses, and modules uploaded by 40 Rajabhat universities via a single login ("National e-learning platform," 2020).

Moreover, the digital learning platform is stated as fulfilling a need for a versatile and flexible education system using diverse modules and curricula. It is also positioned as a platform to promote lifelong learning and meet employers' educational training needs. Finally, the *New Normal* is digital! ("The new normal is digital," 2021).

Curriculum and Instructional System

According to Ysseldyke et al. (2003), education teachers require large amounts of information input in the United States to make effective data-driven decision-making. Moreover, the bottleneck to increasing learning and teaching is the lack of a usable and systematic information system on student classroom performance and progress. However, in their study, when teachers implemented an instructional management system (IMS), learner achievement scores were higher across all learners.

In Korea, Park and Shin (2019) also evaluated an IMS for software education students and stated that an IMS was an effective tool in promoting PSS through computer programming and enhancing digital literacy through ICT skills. In Australia, Andrews et al. (2018) powerfully argued the importance of teachers being advocates and catalysts for system-level improvement. Harris et al. (2020) also stated that curriculum leadership is critical to a school's improvement.

Fortunately for educators today, the IMS is being standardized on large global platforms known as learning management systems (LMS), being supported and used from the Internet 'cloud' (Poondej & Lerdpornkulrat, 2019; Wongpratoom & Sranamkam, 2019). Well-known LMS names for education include *Google Classroom, Moodle*, and *Schoology*. Other big names (*Adobe Captivate Prime, TalentLMS, Docebo Learn LMS*) are primarily used in the corporate training and education market, which by 2025 is expected to reach nearly $26 billion (Pappas, 2020).

Network, Cooperation, and Parental Support Factors

In recent times there has been an increased interest in providing a mechanism for education stakeholders to participate in online teaching and learning. One such system that is growing in popularity in Thailand is the *professional learning community* (PLC), which DuFour (2004, 2007) has stated is not a program or course but rather something that empowers change within schools at all levels. Thus, teachers must focus on the content that is being taught, with teachers being central to a learner's cognitive, emotional, and behavioral development (Kanawapee et al., 2022). Educators must also work collaboratively, focusing on individual cooperation and the community's collective energy (Ontario Principals' Council, 2009).

Therefore, teacher quality can be achieved through continuous professional learning (CPL) and PLCs (Kenan Foundation Asia, 2019). Tanyarattanasrisakul (2017) in Thailand has also noted that PLCs are effective if teachers and the community stakeholders participate in a caring community that shares their visions and values with others. The author also stated that there is a need for teacher leadership and collaboration in learning and 21st-century skill development (Kenan Foundation Asia, 2019). Research points out the many advantages to PLCs, including small educator teams working toward a common goal. Other advantages of PLCs are problem identification and solution examination, learner motivation, higher teacher job satisfaction, and improved morale (Kanawapee et al., 2022; Kenan Foundation Asia, 2019). The numerous advantages of Thai PLCs for educational stakeholders have also been noted in Thailand's *National Strategy 2018-203*7 (2017), which states the importance of community-level lifelong development systems in flexible competency-based education (CBE) (Wannapiroon & Pimdee, 2022).

METHODS

The study used two steps to achieve its objectives. Step 1 was the analysis of the factors affecting TRIAMPAT schools' school management, while Step 2 was concerned with the educational management guidelines used to promote the quality of learners within the group.

Step 1: TRIAMPAT School Group School Management

Population and Sample Size

The sample was drawn from one of Thailand's 19 Triam Udom Suksa Pattanakarn (TRIAMPAT) group schools. Using a mixed research methodology and stratified random sampling 246 participants were selected from 1,443 individuals possible. This included 19 school administrators, 56 deputy administrators, 19 academic supervisors, and 152 academic heads were selected and agreed to participate in the study.

Research Instrument

The research instrument was a questionnaire on the factors of school management that promotes the quality of learners within the TRIAMPAT school group. The questionnaire consisted of three parts, including Part 1's checklist-type items concerning the respondents' status. Part 2 was concerned with learner quality, and Part 3 used items asking for the opinions on the factors of educational institution management that promote learner quality.

Measurement Scale

Part 2 and Part 3 of the questionnaire used a 5-level agreement scale based on the Likert method. The mean interpretive criteria for the educational institution management that promote learner quality input used 4.51 – 5.00 as '*strongly agreed.*' Next was 2.51 – 4.50 as '*somewhat agree,*' 2.51 – 3.50 as '*moderate agreement,*' 1.51 – 2.50 as '*disagree,*' and 1.00 – 1.50 as '*minimal agreement*.'

Expert Questionnaire Assessment

The questionnaire had content validity assessed by five experts from which the index of Item-Objective Congruency (IOC) method was used (IOC = 0.8-1.00) and reliability assessed by Cronbach's Alpha is 0.94.

Data Collection

Due to the complexities of doing face-to-face surveys during the Covid-19 pandemic lockdown, Google Form was used to obtain each person's response to the questionnaire.

Data Analysis

The data was analyzed using descriptive statistics, including frequency, percentage, mean, standard deviation (SD), Pearson's correlation coefficient, and stepwise multiple regression.

Step 2: TRIAMPAT School Group Educational Management Guidelines that Promote Student Quality

School Administrator Selection

The authors used purposive sampling to select and interview seven school administrators in the TRIAMPAT school group both in the Bangkok metropolitan area and surrounding regions. These were 1) the Triam Udom Suksa Pattanakarn (TRIAMPAT) School, 2) the TRIAMPAT Nonthaburi School, 3) the TRIAMPAT Pathum Thani School, 4) the TRIAMPAT Ratchada School in Bangkok and the surrounding metropolitan area. In other regions were 5) the TRIAMPAT Ubon Ratchathani Phatthanakan in the northeastern region, 6) the TRIAMPAT School Pranburi in the southern region, and 7) the TRIAMPAT School in Khelang City in Thailand's north.

Research Tool

The research tool used for the administrator was an interview form containing seven sections containing 16 items concerning educational institution management guidelines that promoted learner quality in the TRIAMPAT school group (Table 1). These seven sections were: 1) teacher quality and performance factors, 2) executive leadership and performance factors, 3) learner readiness factors, 4) school atmosphere and learning environment factors, 5) learning resources, media, technology, innovation, and research factors, 6) curriculum and instructional system factors, and 7) network, cooperation, and parental support factors.

TABLE 1
EDUCATIONAL INSTITUTION MANAGEMENT GUIDELINES THAT PROMOTE LEARNER QUALITY IN THE TRIAMPAT SCHOOL GROUP

Item	Section	Description
y	3	The quality of learners in the TRIAMPAT school group.
x1	1	The quality of teachers and their performance factor scores.
x2	2	The executive leadership and performance factor scores.
x3	3	The student readiness factor score.
x4	4	The school atmosphere and learning environment factor scores.
x5	5	The learning resource, media, technology, innovation, and research factor scores.
x6	6	The course factor scores and teaching system.
x7	7	The network, cooperation, and parental support factor scores.
zy	3	The TRIAMPAT school group student quality standard scores.
zx1	1	The standard scores on teacher quality and performance factors.
zx2	2	The executive leadership and performance factors standard scores.
zx3	3	The student readiness factor standard score.
zx4	4	The school's school atmosphere and learning environment standard scores.
zx5	5	The benchmark score on learning resources, media, technology, innovation, and research.
zx6	6	The standard scores on curriculum factors and teaching systems.
zx7	7	The network cooperation factor benchmark score and support from parents score.

Data Collection

Data collection entailed the following steps: 1) Initial contact and coordination with key informants from which interview permission was obtained, 2) a letter requesting an interview on the specified topic was sent as well as an interview form to each qualified person in advance; 3) schedule a date, time and place for the interview, and 4) the researcher interviews in person as scheduled via the online system.

Data Analysis

Data were analyzed by using content analysis.

RESULTS AND DISCUSSION

School Management

Table 2 shows that the overall educational institution management factors affecting the quality of learners within the TRIAMPAT school group were at a high level ($\bar{x}$ =4.30, SD=0.44). When considering all seven factors, each was found to be at a high level, with the executive leadership and performance factors being of more importance to the student respondents ($\bar{x}$ =4.44, SD=0.49). This was followed by the school's atmosphere and learning environment factors ($\bar{x}$ =4.36, SD=0.54) and the curriculum and instructional system factors ($\bar{x}$ =4.35, SD=0.53).

TABLE 2
MEAN AND SD OF SCHOOL MANAGEMENT FACTORS AFFECTING STUDENT QUALITY

School Management Factors	$\bar{x}$	SD	Level
Teacher quality and performance factors	4.30	0.44	*high*
Executive leadership and performance factors	4.44	0.49	*high*
Learner readiness factors	4.12	0.62	*high*
School atmosphere and learning environment factors	4.36	0.54	*high*
Learning resources, media, technology, innovation, and research factors	4.26	0.58	*high*
Curriculum and instructional system factors	4.35	0.53	*high*
Network, cooperation, and parental support factors	4.26	0.58	*high*
Summation	4.30	0.44	*high*

Table 3 shows the correlation coefficient between school management factors and learners' quality. The correlation values were between 0.34 – 0.72. Also, it was determined that there was a significant and robust relationship between x_4 and x_5, which was the school's atmosphere and learning environment factor scores and the learning resource, media, technology, innovation, and research scores. This was also followed by a strong relationship between x_3 and x_5: student readiness and the learning resource, media, technology, innovation, and research scores. However, of most minor importance was the relationship between y and x_2, which were learner quality and executive leadership and performance factor scores.

TABLE 3
RELATIONSHIP BETWEEN FACTORS AFFECTING LEARNER QUALITY

Variable	y	x_1	x_2	x_3	x_4	x_5	x_6	x_7
y	1.00	0.42**	0.34**	0.36**	0.45**	0.57**	0.50**	0.37**
x_1		1.00	0.46**	0.56**	0.56**	0.65**	0.55**	0.49**
x_2			1.00	0.57**	0.55**	0.65**	0.48**	0.57**
x_3				1.00	0.67**	0.70**	0.57**	0.67**
x_4					1.00	0.72**	0.60**	0.59**
x_5						1.00	0.68**	0.66**
x_6							1.00	0.57**
x_7								1.00

Note. ***p*<.01

Regression Analysis Multicollinearity

Before analyzing the factors of school management that affect the quality of learners within the TRIAMPAT school group, the researchers tested the preliminary agreement on variable relationship or multicollinearity by testing with tolerance and the variance inflation factor **(**VIF) statistic to examine the problem of relationships and variance of the factors (Table 4). It was found that the tolerance value was not close to 0, and the VIF value was less than ten, indicating that there is no multicollinearity problem. Therefore, multiple regressions can be analyzed by using the stepwise regression method.

TABLE 4
THE RESULTS OF THE ANALYSIS OF SCHOOL MANAGEMENT FACTORS AFFECTING THE QUALITY OF LEARNERS

Factor	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig**
	B	Standard Error	Beta		
(Constant)	6.51	2.93		2.22**	0.03
Factors for learning resources, media, technology, innovation and research (x_5)	4.29	0.79	0.42	5.43**	0.00
Curriculum and Instructional System Factors (x_6)	2.53	0.87	0.22	2.90**	0.00
$R = 0.59$, $R^2 = 0.35$, Adjusted R Square = 0.34, Std. Error of the Estimate = 4.91					

Note. ***p*<.01

The analysis revealed that two factors in institutional management had a statistically significant effect on learner quality. These were the learning resource, media, technology, innovation, and research (x_5) factors as well as the curriculum and teaching-learning system (x_6) factors at the 0.01 level, with a predictive coefficient (R^2) of 0.35. This indicates that x_5 and x_6 factors predicted the quality of learners in the TRIAMPAT school group by 35%. The forecast equations were as follows:

$$y = 6.51+4.29\ x_5+2.53x_2 \quad (1)$$

$$z = 0.42\ z_{x5} + 0.22z_{x2} \quad (2)$$

The importance of these two factors (x5 and x6) may be due to teaching materials and learning resources as they are a medium that will help students learn what they do not know or want to learn. This is consistent

with Adebola and Ademola (2011) in Nigeria, who indicated that the learning environment and the teaching materials played the most significant roles in analyzing quality factors affecting math academic achievement.

Most commonly, each school obtains its materials either through an external purchasing process or through donations. However, due to COVID-19 and the closure of the traditional classroom, and the movement to non-traditional online classes, this process has been sporadic and confusing. However, other ways and means to this critical process are being found.

One excellent example of new methods to obtain teaching materials can be found in the Thai government and MOE 'DEEP' initiate, which is dedicated to bringing quality curriculum and teaching materials to Thailand's rural and disadvantaged learners ("National e-learning platform," 2020). Fortunately, these same materials can be used by anyone from anywhere through a single login account and a smartphone connected to the Internet.

It is also a well-documented issue that online education brings a variety of complexities and problems, as well as limitless opportunities. However, how the problems are dealt with is often placed on the teachers' shoulders, which creates difficulties for many. It is now expected that teachers create their materials, especially in blended and flipped classroom environments (Wongpratoom & Sranamkam, 2019), and teach themselves under the 'New Normal'(Ruenphongphun et al., 2021; Siripongdee et al., 2021; Srikan et al., 2021; Wannapiroon & Pimdee, 2022). Also, the digital device used and how long a session is are factors in their effectiveness.

There is also extensive evidence that problem-solving skills (PSS) and computational thinking (CT), and computer programming are highly connected endeavors (Günbatar, 2020; Ozturk, 2021). Interestingly, these studies unified comments that traditional books do not work in academic learner success (quality). Therefore, active learning methods need to be encouraged, as well as virtual reality (VR) use in courses such as physics (Sarapak et al., 2022), and gamification methods experimented with to encourage learner curiosity, motivation, and by extension, academic achievement (Deterding et al., 2011; Kim, 2015; Poondej & Lerdpornkulrat, 2019).

CONCLUSION AND SUGGESTIONS

The results of a study on educational institution management guidelines that promote the quality of learners in schools in the Triam Udom Suksa Pattanakarn (TRIAMPAT) school group operating under guidelines from the Thai Office of the Basic Education Commission found that the schools in the study provided environments and services that encouraged learners to develop desirable characteristics.

A plan to promote learner quality should be implemented by using participatory management processes in planning to improve the quality of education. Planners should develop an educational curriculum that is appropriate to the context of the schools and their learners. Information technology and media should be used to develop learning and build a collaborative network for all stakeholders involved in educational management. All relevant parties should monitor, monitor, audit, and evaluate appropriate educational administration and management processes systematically and continuously. The assessment results should be analyzed with the identified problems and obstacles to finding solutions using the best approaches and procedures available.

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