

CHILDREN DEVELOPMENT EVALUATION AND ACTIVITY-BASED LEARNING AT LAEMTONG WITTAYA SCHOOL UNDER THE COVID-19 SITUATION

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Abstract

Early childhood education is the essential first step of the lifelong learning ladder for all children. When the World Health Organization (WHO) declared a COVID-19 pandemic in March 2020, almost every school in Thailand temporarily closed. Lockdowns and pandemic restrictions have severely impacted the lives of young children and their learning behavior. This research study evaluated children's development and activity-based Learning at Laemtong Wittaya School under the COVID-19 situation. This study is a Quasi-Experimental Research using Posttest Only Nonequivalent Groups Design. The duration of the experiment started from August 2021–October 2021. A population is a group of 133 K1 students at Laemtong Wittaya School, Rangae District, Narathiwat Province. The result revealed that the experimental group has a mean score of 4.82 ($\mu = 4.82$, $\sigma = .39$) and the control group has a mean score of 3.57 ($\mu = 3.57$, $\sigma = .74$). The Children Development Evaluation of the experimental group is at the highest level. The Children Development Evaluation of the control group is at a high level. The study concluded that K1 students who participated in Activity-Based Learning scored higher than K1 students who did not participate in Activity-Based Learning.

Keywords: Children Development Evaluation, Activity-Based Learning, K1 Students, COVID-19.

Background of the Study

Education has been hit particularly hard by the COVID-19 Pandemic, with more than 1.5 billion students out of school. This massive disruption to education can have long-term implications, especially for young students who do not have strong basic fundamental skills. Students are temporarily unable to attend school in-person, and remote learning is therefore temporarily implemented. While the educational community has made rigorous efforts to maintain learning continuity during this period, students have had to rely more on their resources to continue learning remotely through internet access. Teachers also had to adapt to new pedagogical concepts for which they may not have been trained. In particular, students who do not have access to digital learning resources are at risk of falling behind [2][6].

In response to this massive disruption, the Thai Ministry of Education launched five learning platforms to bridge the gap and make learning as effective as possible. The five learning platforms are On-Site, Online, On-Demand, On-Air, and On-Hand. The Ministry of Education grants the schools the ability to choose the most appropriate learning platform for themselves. Some schools blend different learning platforms. Governmental agencies and educational institutions must monitor their action plans closely to ensure that students continue to get high-quality and rigorous learning despite the COVID-19 Pandemic [8][11].

Despite all the efforts, students still suffer from learning loss from remote learning, especially the kindergarteners. Learning loss refers to any specific or general loss of knowledge and skills or reversals in academic progress, most commonly due to extended gaps or discontinuities in a student's education. Parents have reported that younger children do not have enough physical activity while learning from home. Restrictions on physical movement, interactions, and play have negatively impacted children's development. For this reason, schools across Thailand begin planning for a safe transition back to in-person learning. Even though the rate of COVID-19 cases has improved, the

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number could go back up with so many still unvaccinated. While it is still not safe to reopen the schools, the new challenge is to design a better learning platform for kindergarteners [8].

According to Dr. Jessica Alvarado [1], academic program director for the BA in Early Childhood Development at National University, early childhood education refers to the period from a child's birth to when they enter kindergarten. Alvarado said it is an important time in children's lives because they first learn how to interact with others, including peers, teachers, and parents, and develop interests that will stay with them throughout their lives. Kindergarten is a time of growth and exploration, where children learn by experiencing the world around them. How to minimize learning loss during the COVID-19 situation, especially for young children where physical activities and classroom interaction play a crucial role in Learning? Activity-Based Learning is a methodology where children learn at their own pace through various supervised activities. It is a more engaging and interactive way of teaching children. It allows for monitoring speech, coordination, social skills, and motor skills, amongst other key factors. It is a fun approach to learning as it boosts the development of the brain in children by providing constant stimulus by prompting them for responses. Activity-based Learning is achieved broadly in three ways, exploration, experimentation, and expression.

Early childhood education is more than preparation for primary school. It aims at the holistic development of a child's social, emotional, cognitive, and physical needs to build a solid and broad foundation for lifelong learning and wellbeing [7]. While remote learning might not be the best learning platform for younger children and reopening school is not yet an option, a temporary solution offers a blended learning platform under the Ministry of Public Health guidelines. The quality of education must be delivered at all times.

Objective of the Study

The study's objective was to evaluate and compare children's development using Activity-Based

Learning under the COVID-19 situation at Laemtong Wittaya School.

Hypothesis

The experimental group scores are higher than the control group.

Scope of the Study

This research study is a case study of Laemtong Wittaya School in Narathiwat Province of Thailand. The content of the study includes early childhood education, children development evaluation, activity-based Learning under the COVID-19 situation.

Methodology

Due to several restrictions of the COVID-19 situation and the real-time setting of this case study, the researcher has chosen a Quasi-Experimental method with a Posttest Only Nonequivalent Groups Design. The study population is the K1 students of Laemtong Wittaya School in Narathiwat Province of Thailand. In this design, participants in one group are exposed to a treatment, a nonequivalent group is not exposed to the treatment, and then the two groups are compared. With parental consent, the students were asked to voluntarily choose their Learning Model during the COVID-19 situation. The experimental group consisted of 84 K1 students, and the control group consisted of 49 K1 students. While the participant numbers were unequal, the characteristics of the students were similar in terms of demography and prior test scores.

The lesson plans and the evaluation form were created by the Laemtong Wittaya Academic department and validated by five experts in the field. The tryout process was conducted to ensure the reliability of lesson plans and the evaluation form before the experiment had begun. The experiment consisted of 8 treatments in 8 weeks of the first semester in the 2021 academic year and was conducted by a team of 6 homeroom teachers and 12 teacher assistants. The researcher stayed in the classroom during the lessons and the evaluation rotation. The collected data were computed via statistical calculation: Mean and Standard Deviation.

Table 1: Interpretation of Mean Score

Mean score	Interpretation of mean score
1.00 – 1.79	Very low
1.80 – 2.59	Low
2.60 – 3.39	Medium
3.40 – 4.19	High
4.20 – 5.00	Very high

(Source: Educational Planning and Research Division (EPRD), MOE, 2006)

Result

This research study aims to evaluate the children's development of K1 students. The data shows that there are 133 participants total. Eighty-four

participants from the experimental group represent 63.16% of the entire population, and 49 participants from the control group represent 36.84 %.

Table 2: Participants

(N=133)

Group Types	Participants	Percentage
Experimental Group	84	63.16
Control Group	49	36.84
Total	133	100.0

After eight treatments, the evaluation was performed for both groups simultaneously. The experimental group participated in the Activity-Based Learning platform, while the control group did not participate. The data from table 2 shows that the experimental group has a mean score of 4.82 ($\mu = 4.82$, $\sigma = .39$) and the control group has a

mean score of 3.57 ($\mu = 3.57$, $\sigma = .74$). The Children Development Evaluation of the experimental group is at the highest level. The Children Development Evaluation of the control group is at a high level. The experimental group scored higher than the control group.

Table 3: Childhood Development Evaluation Score

(N=133)

Group Types	Participants	μ	σ	Children Development Evaluation Level
Experimental Group	84	4.82	.39	Highest
Control Group	49	3.57	.74	High
Total	133			

Conclusion and Discussion

Because of the worst wave of COVID-19 that began in April 2021, primary and secondary schools in Thailand had postponed the first day of school to June 1, 2021. The Thai Ministry of Education launched five learning platforms that offer formal but flexible learning under the COVID-19 Pandemic. The Ministry of Education grants the schools the authority to select the most appropriate learning platforms. The five learning platforms include 1) On-Site learning, where students are actually on campus, and this learning platform is only suitable for smaller schools. 2) Online learning using electronic devices and Internet connection. Online learning offers teachers an efficient way to deliver lessons to students, but there are still minimal physical interactions between students and teachers. Another key challenge of online classes is internet connectivity. 3) On-Demand learning using electronic applications such as videos, class recordings, PDF's and presentations that each learner can proceed through at their own speed. While there are many

benefits, students still experience a sense of isolation. 4) On-Air learning or Distance Learning Television is a learning platform where governmental agency broadcasts educational programs for distance learning. 5) On-Hand learning (Paper-based) is a learning platform that utilizes worksheets and textbooks as their main source of education. This platform aims to solve the digital divide problem, but a huge disadvantage is students' interaction.

Due to many challenges in Narathiwat province, such as low literacy and income level, geographical restrictions, and lack of physical access to technology, most schools had chosen the On-Hand learning platform as their temporary learning platform during the COVID-19 situation. Based on a survey of parents and students, students' biggest obstacles while learning at home are a lack of motivation and interest. The young children wake up every morning with a big disappointment knowing that their school is still close. Parents and teachers are concerned about young children's academic performance and development. The

school had to evaluate the current learning platform and consider a new and possible learning activity for the kindergarteners under the COVID-19 situation. Laemtong Wittaya School had conducted a survey and found that more than half of kindergarten parents are interested in participating in the newly blended learning platform using Activity-Based Learning design.

The data obtained from the research study reveals that 63.2 % of K1 students voluntarily chose to participate in Activity-Based Learning. In comparison, only 36.8 % chose the traditional method of Learning (On-Hand Learning), which can be concluded that 63.2 % of the K1 households had strong confidence in school's health and safety

plans and protocols during COVID-19. Ongoing communication, transparency of actions, and a strong engagement between the school and the community contribute to this successful ratio. Under the COVID-19 situation, Laemtong Wittaya School had strictly followed the Health and Safety protocols regulated by the Ministry of Public Health for on-site activities at school. A small group of no more than ten students per classroom was supervised by one homeroom teacher and one teacher assistant. Everyone must follow the DHMTT guidelines to help reduce the spread of the virus by distancing students, mask-wearing at all times, hand washing for at least 20 seconds, Temperature testing, and using the Thai Chana Application daily to monitor the risk.

Figure 1: Panning Session: COVID-19 Health and Safety Protocols



Figure 2: School Facility: COVID-19 Disinfection



The research study has confirmed that activity-based learning leads to higher children development evaluation even under eight weeks. Activity-Based Learning has numerous benefits, especially in early childhood development. 1) Activity-Based Learning encourages children to be curious and independent. This type of Learning stimulates their curiosity using the method of learning by doing. 2) Activity-Based Learning supports the development of social skills in the team setting. It improves children's confidence, cooperation, and communication skills. 3) Activity-Based Learning enhances memory. Hands-on activities help children remember things longer than reading and listening. The retention and recall

rates are certainly better with activity-based Learning. 4) Activity-Based Learning encourages young children to express themselves freely. Hands-on activities help children get in touch with their emotions and the way to express them. 5) Continuous engagement is the most significant benefit of Activity-Based Learning. Unlike classroom teaching, Activity-Based Learning helps reduce and eliminate inattention and distraction. Since the children are actively involved at every step of the activity. 6) Activity-Based Learning promotes learning at each child's pace because not all children can grasp new ideas at the same pace and time. Each child is unique, even in their ability

to learn. 7) Activity-Based Learning enhances a sense of accomplishment and achievement [3].

Figure 3: Planning Session: Activity-Based Learning



There are four major areas of early childhood development: Physical, Social-Emotional, Cognitive (Learning, thinking, and problem-solving), and Language and communication. In healthy children, these areas are all important in growth and development. When you consider a learning environment, these growth areas intersect. Educators must understand development as a whole, and you see that educating children goes way beyond letters and numbers. According to the CDC outline of important milestones, our K1 students (3-4 years of age) must be able to do the following; 1) Physical development includes running easily, pedaling a tricycle, walking up and downstairs, and climbing well; 2) Social and

Emotional development include showing affections without prompting, showing concern for crying friends, taking turns, copying adults or friends; 3) Cognitive development includes building towers of more than six blocks, using pencils and crayons, doing puzzles, playing make-believe with dolls and friends, turning books one page at a time, and opening lids; 4) Language and communication development include following easy instructions, saying your name and age, having 2-3 sentences conversation, talking well enough for strangers to understand most of the time, and naming things and animals.

Figure 4: Activity-Based Learning



School reopening certainly brings unquestionable benefits to students and the wider economy, and it will bring economic benefits to families by enabling some parents to return to work. Those benefits, however, must be carefully weighed against the health risks. While an On-Site learning platform is not an option for Laemtong Wittaya School presently, the board of school committee agreed that delivering top quality education is their number one priority regardless of the situation. From this experimental research study, Activity-Based Learning seems to be a better teaching and learning approach for younger students. This methodology has gained profound importance that even toy companies employ this approach to produce activity-based and educational toys. This learning platform helps stimulate the minds of young children and helps keep them positively occupied.

Conflict of Interest

There is no conflict of interest between the authors in this manuscript.

Recommendation

While the COVID-19 Pandemic disrupted normal education and created many challenges, it also paved the way for new experiences and changes which can be positive and should be maintained after the Pandemic. Examples include smaller groups of children, deeper relationships with parents, improved hygiene routines, and outdoor learning promotion.

Kindergarten teachers at Laemtong Wittaya School noted interacting with each child more frequently and following up on children's interests more fully due to smaller group sizes and more favorable adult-child ratios. Additional changes they wanted to maintain fell into the following categories: changed practices for dropping children off (distancing, outside areas only); hygiene focus; increased outdoor life; adaptation of the arrangements for holding staff meetings and parent meetings.

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