

Rural vs Urban: How COVID-19 Pandemic Has Different Impacts on Students in Light of Educational Inequalities in Thailand

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Abstract

The educational inequality has been a major obstacle to the development of Thailand. It could be well seen between the urban and rural areas, especially during the COVID-19 pandemic. The purpose of this study is to evaluate and recognize the disruptive impact that the pandemic poses upon the education system in Thailand which dramatically contributes to the worsening situation of inequality in the system. Particularly, the study investigates and compares the effects of the pandemic on students' life living and studying in urban and rural areas. In this context, the urban area refers to the area in Bangkok; the relatively less urban area is the central area excluding Bangkok; and the rural area refers to the areas in the other regions in the country. To acquire the data set, a survey is the primary research method being conducted. Respondents are asked about three sets of questions: the monthly income and the educational level of the parents, and the effects of the pandemic on the students' lives—their education, their mental health and their overall well-being. Moreover, the students are also asked about how they deal with the encountered struggles. Responses to the questions are analysed in three main groups: the rural, urban and central. The results show that the educational level of the parents strongly correlates with the income of the household as predicted. However, the impacts of the pandemic on the three aspects of the student's lives are affected similarly. Besides, the provided solutions to the problems are still vague.

Keywords: COVID-19; rural vs urban; education inequality

1 Research background

1.1 Introduction

In this chapter, theories we incorporate into this research will be explained and linked to the problem we are focusing on, educational disparities between urban and rural areas in Thailand during the COVID-19 pandemic. There are 3 main topics regarding this: the long-rooted history of educational inequalities in Thailand, rural and urban areas structure, and COVID-19 pandemic effects.

1.2 History of educational inequalities in Thailand

The awareness of inequality and inequity has always been recognized to be a plague to the Thai education system. To improve the quality of education, several reforms have been carried out. The issues of inequality in the system are written in a chronological order according to the timeline of reforms and major situations:

1.2.1 Education system before 1868

The earliest form of Education in Thailand started when King Ramkhamhaeng invented the Thai alphabet during the Sukhothai period, dated in the 13th Century A.D. However, it was only accessible to certain communities which were the aristocracy and the clergy (MOE, 2000). It was necessary for the aristocrats or monarchs to be literate to rule the sovereignty. While the clerics or monks had to be able to read the written doctrine to practice accordingly.

It was found in the following periods that the basic structure of education created in the Sukhothai period was set to be the education foundation and that it still remained in a similar form during the early reigns of Bangkok.

1.2.2 Education system during the first reform 1868-1910

As a pursuit of King Chulalongkorn, the education system was unprecedentedly modernized. To realize the modernization, in 1871 and following years, bilingual schools were established in the palace to prepare princes and nobles for further studies abroad. In 1884, the first school for commoners was established. However, the schools were initially found in the Bangkok area and only available in other provinces in 1898 (Sangnapaboworn, 2007).

There was an education Act and education plans that required children to attend school. Despite compulsory primary education being regarded as free, citizens aged 18-60 years still needed to pay an educational tax (Sangnapaboworn, 2007).

Moreover, the Department of Education, renamed as Ministry of Education (MOE), which was and still is one of the prominent education institutions, was established during this period. It was originally responsible for overseeing and operating the education of the entire country when established in 1887 (MOE, 2000), but it was transferred to provincial administrative organizations under the Ministry of Interior (MOI) during the Military Dictatorship in 1996.

Though it seemed to be more locals-centered, it was considered a downfall in education as the Minister was corrupt (Sangnapaboworn, 2007).

Despite the attempt, the major issue that concerned the educational inequality during this reform was the distribution of quality education across the country (Fry, 2002). The educational resources, such as facilities and materials, were sufficiently or even excessively concentrated in the Bangkok area, while the other areas encountered the opposite with the limited number of resources, especially when the economic crisis occurred after World War I, resulting in a stronger centralization system (Sangnapaboworn, 2007).

1.2.3 Education system during the second reform 1973-1980

After the historic student uprising in October 1973, a major educational reform movement emerged. Significantly, an Education Reform Committee was established. Their proposals were regarded as the most ambitious education plan to create equality, equity, freedom, rationality, and public awareness in Thai society. In addition, the awareness of inequality was further enhanced when one of the nine aims of the National Education Plan 1977 was solely dedicated to maintaining the promoted equality, honesty, and equity.

The deteriorating primary education under MOI, caused during the first reform, was recovered when it was transferred back to be under MOE with the Office of the National Primary Education Commission (ONPEC) overseeing, in compliance with the National Primary Education Act 1980.

Along with the structural change, other various aspects were also revolutionized. Policies that considerably promoted equality in the education system were implemented including the establishment of primary schools in every village throughout the country and the availability of lower secondary education that was provided in many primary schools in remote areas (Sangnapaboworn, 2007).

1.2.4 Education system during the third reform 1990-1995

After the collapse of the Soviet Union in 1989, globalization increasingly started to make impacts globally (Vanham, 2020). To become internationally competitive, another reform in the country's educational system was urged (Fry, 2002).

The key agenda of the reform indicated the determination to further develop a society on the basis of equality. Accordingly, the Basic and Occupational Education and Training (BOET) Project was innovated in 1993. Its purpose was to develop and implement a reform design that would increase the educational accessibility and improve the quality of basic and occupational education in Thailand. Remarkably, it was centered around decentralization of the educational management system. Moreover, there was also a goal to expand the roles and

responsibilities of the local community in school governance. With this reform, the issues of local needs, accountability and quality assurance were introduced. However, the attempt to decentralize the system was undermined as the project had limited duration and scope of authority. Therefore, the outcome could not be sustainably implemented under rigid rules and regulations in the existing centralized system (Hallinger et al. 2000).

During this period, regardless of the failures, the provision of education was quantitatively expanded on a large scale, and the enrolment ratio of students increased. However, the number of students in fact decreased due to the declining birth rate. In addition, many children did not gain access to school, particularly the disadvantaged in remote areas, the disabled, and the financially troubled (Sangnapaboworn, 2007).

1.2.5 Education system during the fourth reform 1997-2019

As part of the country's strategy to recover the economy from the economic crisis in 1997, a new education reform was initiated. Policy targeting inequality and inequity in the education system were proposed as Thailand was evaluated to be behind other nations in many major aspects of educational quality in contrast to a great educational investment annually. The major problems caused by the existence of a centralized education system remained unsolved and continued to rise. For instance, the funding was not efficiently and generally prioritized—it was excessively concentrated in certain areas in the country (Fry, 2002).

Although primary education was nearly accessible to every child by this period, there were some struggles to provide proper access to secondary education. Having an excess number of small schools became a major issue that needed to be addressed. A lot of schools were established to “resolve” the inequality. However, it was rather considered as an absolute superficial solution as they had relatively far less potential to provide proper and quality education. Furthermore, it actually acted as a big factor that contributed to the inequality in the education system (Kawwongsa, 2019).

According to the Office of the Basic Education Commission (OBEC), the allocation of the budget for all schools in Thailand uses equity-based budgeting. The Equitable Education Fund (EEF) collected and illustrated the analyzed data involving the management of educational budget in an expenses-number of students in school graph. In the graph, the schools that had fewer than 120 students received the funding shown as the green linear line while they should have obtained the red line to provide a quality education. In contrast to that, schools with the number of students more than 120 received excessive funding, colored in purple, when they only needed the amount of budget according to the red line to provide the same quality education. Therefore, the cost of educational management was incompatible with the size of schools, increasing the gap between the small schools, which were mostly located in the remote or rural areas, and the larger schools, which were mostly in the urban areas (Kawwongsa, 2019).

1.2.6 Education system during COVID-19 situation 2020-2021

In wake of the emergence of the COVID-19 pandemic, the disparity between students in the urban and rural community has dramatically widened. According to the nature of the COVID-19 virus, which is extremely communicable and fatal, it becomes necessary not to be physically in contact with other individuals. As a result, students were put to perform online distance learning. The consequences and solutions of it are discussed in the following topics of this paper, and the major issue that is due to the inequality in society is the shortage of studying tools and the internet which has put millions of students out of school.

1.3 Structure of rural and urban areas

1.3.1 Social structure

Social structure is a patterned social relations along with its different, yet interdependent, institutions comprising family, religion, law, media, economy, education, and politics. Each and every one of them organizes people into various roles generally hierarchically, stratifying groups of people into various social and education classes which we will be focusing on in this topic.

1.3.1.1 Social stratification impact on education

Social stratification, or social class, and education class have strong and obvious correlation. People from higher social class or so-called the wealthier have more means and access to more prestigious schools or institutions, and thus they receive higher education. Consequently, this contributes to them having better-paid jobs.

The upper-class parents then send their children to schools of higher quality such as private schools. Additionally, some prestigious schools and universities offer legacy admission: a special consideration for alumni's children. These institutions are typically located in affluent areas. This, combined with the law of demand and supply, makes the communities of each class drift apart even more.

As a result, this phenomenon worsens the inequality as firstly, it widens the gap between the upper and lower classes, making the poor poorer and the rich richer. The communities shift apart on the opposing spectra of life quality. The high-quality schools become harder to reach. Secondly, the aforementioned cycle grows stronger and more difficult to break.

It is obviously shown that social stratification from the past, as well as pre-existing inequalities, contributes to educational inequality.

1.3.2 Regional disparities

Regional disparity or inequality is the unequal job and economic opportunities in different areas in a country. This has been an enormous issue in society for long, especially regarding education inequalities.

In Thailand, this problem is ubiquitous and very common as growth and prosperity are compact in Bangkok, the capital city. Despite the overall picture of inequality being decreased in level, it is mainly because the provinces with upper income class' growth has slowed down. People inhabiting distinguished areas of the country face dissimilar life opportunities including career, education, and welfare. This brings about the even-bigger income gap which in turn worsen regional disparity, hinders the country's economic and also education growth.

It can be safely and clearly observed that regional disparity in Thailand remains high according to Coefficient of Variation and GINI Coefficient. From the figures, the high Coefficient of Variation and GINI Coefficient, calculated from Real GPP per Capita, indicate the high inequality (Thepkham, 2019).

Regional factors can greatly explain the differences in income opportunity. People having the same or similar vocation receive significantly contrasting earnings if they are not working in the same region: Bangkok, Central, Northern, Northeastern, and Southern (Thepkham, 2019).

It can be concluded that people working in Bangkok, the primate city in Thailand, acquire the most income when compared to other regions in the country whereas individuals who work in the Northeastern part of Thailand achieve significantly lower amounts of money, generally around half of the highest-gainers. Undeniably, households with lower income usually obtain lower education, public health, and transportation quality and vice versa.

1.4 Impacts of COVID-19 towards schooling

Since the first discovery of COVID-19 infection cases on January 3, 2020, Thailand has been experiencing ups and downs on the number of confirmed cases leading to a closure of educational institutions at different severity since the first quarter of 2020 (WHO, 2021) (Bhatia, Dutta, & McClure, 2021).

On March, 18, 2020, all local and international schools nationwide were required to close all levels due to a dramatic surge of confirmed cases from a 2-digit number to a 3-digit number, which is the country's highest daily increase at that time (Allan, 2020). The Thai government was going to review the situation bimonthly, for a possible reopening of schools, but it was announced in April that on-site schooling would not be resumed until July 1, 2020, with new online learning methods implemented (Bangkok Post Public Company Limited, 2020b). The beginning of a brand new school year was originally scheduled on May 15 of every year. In 2020, due to the postponement of the back-to-school era to around one and a half months later, the Thai government intended to cancel future public holidays in order to make up for the difference which has led to students studying for more days per month when the semester finally started (Asia, 2021).

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As on-site schooling could not be proceeded, DLTV, an abbreviation of Distance Learning Television, has been adopted for underprivileged students nationwide to study recorded classes from television broadcasts during the 1.5 month quarantine period, expecting parents or guardians to take part in assisting teachers to guide their kids through their studies at home (UNESCO Bangkok, 2020). Other Thai schools have also come up with remote teaching methods, such as uploading recorded lectures online, adopting an online conference on Zoom and Google Meet, assigning homework through Google Classroom and keeping contact with students via Facebook or Line (McNeil, 2020).

One of the major problems that arise during online learning is undeniably the widening of educational inequalities. International schools, with higher-quality education and teachers, higher tuition fees from 80,000 to 1,000,000 THB annually, higher proportion of teacher to student ratio, modern facilities and campuses, wider range of extracurricular activities and opportunities in comparison to local public schools run by government, are attended by students in families of high income and who are in the upper class in the society (National Family Learning Network, 2018). According to the United Nations Thailand, international private schools are not required to be closed (UNESCO Bangkok, 2020). Students from these private schools would surely cope with online methods of schooling better than the ones from governmental schools. With higher income that equals a higher capability to afford necessary learning equipment like internet connection, tablets and computers, online learning would not pose a substantial problem in their lives (Asia, 2021).

In contrast, many underprivileged students with families of low-paid jobs would not have the financial support to purchase electronic devices to study from their homes. Only 21% of Thai households possess computers, which is a lower percentage than the number of households globally and in developing countries. In 2017, only 3% of households with an average annual income of less than 200,000 THB and 19% of households with an average annual income of 200,000 THB or more have computers with internet connection. Bangkok also holds a higher proportion of households with computers and internet connection than in other regions of the country. Currently, the government does not provide any financial support for either high-school or university students who could not afford electronic devices for online learning (T., 2020). In addition to technological devices, basic resources necessary for studying like textbooks and stationery items were in shortage in some government schools in Bangkok and other provinces (Chang, 2020). Small schools would be hit the hardest with inadequate funding to sustain all the necessary expenses and with a higher proportion of students without technological devices and internet access for online learning (Bangkok Post Public Company Limited, & Chaiyong, 2020).

Other problems include the teaching practices during the quarantine, as Thailand is mostly unprepared for online teaching methods with only few teachers having trained on technology usage. Quality and efficient online schooling would be a hard milestone to achieve (Asia, 2021). Positively, teachers gradually acquired digital skills with less than 50 percent of teachers with technological knowledge up to 96 percent after online learning methods were implemented (Yee, 2020).

Other types of education are also severely impacted by the pandemic. Standardized tests like SAT and ACT were postponed and cancelled many times especially in 2020 due to high risk of infection at exam centers, creating huge disappointments for kids prepping for months for the exams and could possibly stop them from applying to colleges abroad (Seunbane, 2020). Tutoring businesses, preparing students for university entrance exams, are also affected by the outbreak resulting in the need to switch classes from in-person to online in order to survive, as well as less students seeking for their services. Students with parents of less income struggle even more as they could not afford to pay for extra tutoring courses (Bangkok Post Public Company Limited, & Mala, 2020).

It was a relief on August 13, 2020 as schools across the country have fully reopened due to a huge drop in the number of confirmed cases, with even days with no infection at all (N., 2020). However, the institutions needed to respect strict disease-control measures such as wearing face masks at all times, cleaning hands frequently with alcohol-based sanitizers, following social-distancing rules, going through screening points like measuring temperatures and scanning qr code for data collection. The number of students in each class is lessened, the desks are being set further apart with partitions installed in-between (NXPO, 2020). Large gatherings are also not allowed (UNICEF Thailand, 2020).

Later on, Thai schools faced uncertainties due to a fluctuating graph of the number of confirmed cases. In late December 2020, more than 10,000 schools in 28 provinces including Bangkok and its surrounding provinces were closed again due to new coronavirus cases being discovered up to a 4-digit number daily, postponing the reopening of the second semester to the very end of January. Extracurricular activities were paused, tests and exams were switched to online and online methods of learning have returned (Bangkok Post Public Company Limited, 2020a) (Bangkok Post Public Company Limited, & Mala, 2021). In February 2021, it was announced that most schools will open their doors except in Samut Sakorn where the new epicenter outbreak recently occurred (Huaxia, 2021). After a dramatic change in the number of confirmed cases in the months of March and April 2021, to an overwhelming 5-digit number of infections daily, Thailand was back to implementing full lockdown measures closing all schools nationwide (Reuters, 2021).

Similar to last year, 2021's school year has been postponed from May to June in order to make time for educators to get vaccinated. Provinces in the "red zones", with a high number of infections including Bangkok and its suburbs, still had to remain closed and implement online learning methods (N., 2021). These current measures have been carried out since mid-2021 and because the number of infections were not improving, at 5-digit daily, most students were still learning through online portals. If the lockdown policies are being implemented for longer days, students with parents of no income might have to drop out of the education system due to no financial support. Thailand's education is only free of charge until Grade 9, making it impossible for children who do not have educational funding to continue their studies in high schools or universities. This would make these unfortunate children left vulnerable in the future, with less likelihood to return to the education system once they already quitted (Saokaew, 2021). As of November 2021, Thailand is still at 10,000 infections per day yet the country is reopening its borders for vaccinated tourists to revive the economy and most schools are still continuing with online classes (BBC News, 2021).

2 Methodology

2.1 Types of research and variables

The principal themes of the research touched the areas of social sciences, health, psychology, history and geography, therefore, we decided to rely on a qualitative method in collecting data with a survey consisting of multiple choice questions and open questions. We chose to create an online survey in Google Forms, as it would be the most possible and effective method, given that Thailand is still implementing lockdown measures in response to the ongoing outbreak at the time of conducting research. The survey was sent online to numerous social platforms ranging from Facebook, Line, Twitter, and Instagram to collect data from high school students in both rural and urban areas.

This research is also a secondary research, which relies on collecting data from the survey as well as pre-existing information from various online sources. The information is significant in order to increase the understanding of readers towards the topic of the research, and is helpful towards analysing the cause of the responses in the data analysis process. This began by researching background information in order to find responses to the three major questions: what are the history of inequalities in education (and how it gets worse during the pandemic), what are the structure of rural and urban areas like (and whether pandemic has an effect on it), how rural and urban areas contribute to inequalities in education during the pandemic.

In addition to the different locations of schools and the areas of the country where each student lives that influenced the severity of the impacts from the pandemic, we believe that what determines the inequalities of education also come from other factors, especially the

socio-economic status of their parents. Accordingly, we limit the variables of this research to only three main subjects: school location, parents' education level, and parents' income.

2.2 Data collection

As the research is mainly based on the theme of education in Thailand, we consider that it is best to limit the respondents to only students pursuing their studies in the Thai education system. The target group was limited to high-school students, aging between 14 to 19 years old, as we believe it would be the age that students are starting to possess their own thinking, make their own decisions, have their own responsibility and future plans, right on the edge of becoming independent adults. Still, high-school students are in need of support both mentally and financially from their parents or families most of the time. Parents' socio-economic capability therefore matters greatly to the lives of their children. Primary school students would not be a perfect fit because their behaviors and decisions depend a lot on their parents' while university students would be at the age that is already considered as fully independent adults. We also limit the number of respondents to around 200-300 people with 100-150 responses from students in rural and urban areas each, in order to collect enough information for analysis and a fair comparison of equal number of responses between the two areas. At the end, we received 226 responses in which 65 are from respondents in Bangkok, 55 from respondents in the central region and 106 are from respondents in rural areas.

Parents' highest educational levels are divided into six different categories: Primary school or lower, Middle school, Secondary school, Vocational Certificate/ High Vocational Certificate/ Diploma, Bachelor's degree, Master's degree or higher. According to Thailand's current education system which requires every citizen to finish at least Grade 9 (Middle school), parents who received education at only a primary school level or middle school level are considered as receiving only a minimal education level.

Monthly income is classified into 6 intervals, using 5 benchmarks: \$510, 1.5k, 3k, and 9k. We calculate the range in reference to the US income class (Pew Charitable Trusts) which is divided into middle class lower bound and middle class upper bound according to each State's cost of living. After we compared the costs with Thailand's, we noticed that the appropriate income classes we should base on for "upper middle income class" and "lower middle income class" were Maryland's upper bound and Mississippi's lower bound accordingly. Subsequently, we quartered the numbers conforming to a 2018 research, Thailand's cost of living is one-fourth of the US'. For "middle middle income class", we referred to Thai's demographic statistics, which is around \$1.5k per month. Lastly, in accordance with a number from the World Bank, the upper class income for Thai people is equal to or more than \$9k.

2.3 Region grouping system

Thailand is variably divided into different sets of regions for different types of studies. In this research, we used the six-region geographical system for the rest of data analysis which consists of north, northeast, central, east, west and south regions of Thailand. This is because a six-region grouping, made for geographical and scientific purposes, is a more accurate and detailed division of provinces. The central region including Bangkok has a distinctly high development and economic concentration compared to the other surrounding provinces, therefore, it might not be suitable to group some provinces together like the four-region system does.

2.4 Rural and urban areas categorization

In the tables of analysis, we also grouped the north, northeast, east, west and south regions together as rural areas. Bangkok is categorised as the only urban area of the country with a higher human development rate than the rest of the country, according to the sub-national human development index in 2019 (Global Data Lab, 2019). The UN habitat also mentioned that Bangkok dominates around 80 percent of the urban area in the entire country, therefore, we would consider Bangkok as the only urban area in this research (UN HABITAT THAILAND, 2018). The central region surrounding Bangkok is considered as the rural area with higher development than the rest of the rural regions.

2.5 Data analysis

After collecting responses from the survey, we put them into the allotted tables: Tables 2.1-2.5, then, converted the numbers into percentages to make analysis more precise. For the open question section, as the responses are qualitative data, we analysed them based on the common characters and issues.

3 Results and data analyses

3.1 Highest education and salary of the parents in different areas

Table 3.1 Highest Education and Salary of the Parents in Different Areas

Region	Highest Education of the Parents	Salary of the Parents					
		Overall	Less than \$510	\$510 - \$1,500	\$1,501 - \$3,000	\$3,001 - \$9,000	More than \$9,000
Rural Areas	Primary School or Lower	7.95%	28.57%	28.57%	28.57%	14.29%	0.00%
	Middle School	5.68%	40.00%	60.00%	0.00%	0.00%	0.00%

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	Secondary School	12.50%	9.09%	54.55%	18.18%	9.09%	9.09%
	(High) Vocational Certificate	5.68%	40.00%	40.00%	20.00%	0.00%	0.00%
	Bachelor's Degree	59.09%	5.88%	43.14%	37.25%	11.76%	1.96%
	Master's Degree or Higher	15.90%	0.00%	50.00%	50.00%	0.00%	0.00%
	Overall	100.00%	10.75%	46.24%	33.33%	8.60%	2.16%
Central	Primary School or Lower	1.85%	0.00%	100.00%	0.00%	0.00%	0.00%
	Middle School	3.70%	50.00%	50.00%	0.00%	0.00%	0.00%
	Secondary School	14.81%	12.50%	50.00%	37.50%	0.00%	0.00%
	(High) Vocational Certificate	11.11%	16.67%	66.67%	0.00%	16.67%	0.00%
	Bachelor's Degree	42.59%	8.70%	39.13%	30.43%	8.70%	8.70%
	Master's Degree or Higher	25.93%	6.67%	13.33%	20.00%	46.67%	13.33%
	Overall	100.00%	10.91%	38.18%	23.64%	20.00%	7.27%
Bangkok	Primary School or Lower	3.08%	0.00%	50.00%	50.00%	0.00%	0.00%
	Middle School	3.08%	0.00%	50.00%	0.00%	50.00%	0.00%
	Secondary School	12.31%	37.5%	37.5%	0.00%	0.00%	25.00%
	(High) Vocational Certificate	13.85%	33.33%	66.66%	0.00%	0.00%	0.00%
	Bachelor's Degree	38.46%	12.00%	32.00%	24.00%	20.00%	12.00%
	Master's Degree or Higher	29.23%	0.00%	15.79%	42.11%	26.32%	15.79%
	Overall	100.00%	13.85%	33.85%	23.08%	16.92%	12.31%
Overall	Primary School or Lower	4.72%	20.00%	40.00%	30.00%	10.00%	0.00%
	Middle School	4.25%	33.33%	55.56%	0.00%	11.11%	0.00%
	Secondary School	12.74%	18.52%	48.15%	18.52%	3.70%	11.11%
	(High) Vocational Certificate	9.43%	30.00%	60.00%	5.00%	5.00%	0.00%

	Bachelor's Degree	46.70%	8.08%	39.39%	32.32%	14.14%	24.06%
	Master's Degree or Higher	22.17%	2.13%	25.53%	38.30%	25.53%	8.51%

Table 3.1 shows the connection between the students' parents' educational level and their monthly income rate. As a result, the two criteria depend on each other most of the time. Parents who obtained a high educational level often also possess a high salary. The majority of the parents who finished primary school or lower, middle school, secondary school or vocational school, have a salary of between \$510 - \$1,500. Only a minority has a salary of more than \$3,000 and it would be quite impossible to obtain a salary of more than \$9,000. In contrast, only around 47 percent of the parents who finished bachelor's degree and around 27 percent of the parents who finished master's degree or higher have a salary of \$1,500 or less. It can be seen that as the educational level goes higher, the average salary often rises accordingly. This explains that education is a significant factor in determining the income rate in professional life, which should be prioritized.

Surprisingly, parents in rural areas do not necessarily obtain a lower educational level than parents in urban areas. Around 20 percent of the responses said their parents finished a primary school or lower, middle school or secondary school, which are quite evenly distributed among rural and urban areas with no distinguishable points. Almost 60 percent of the parents in rural areas obtained a bachelor's degree, which is a higher percentage than that in urban areas. This might be because of the social norm that is very common in rural areas to reach a milestone in life of at least completing a university degree. Master's degree education is less common in rural areas than in urban areas, which might be because of the lack of universities in rural provinces as well as the social norms that push rural citizens to go to work as soon as they finish school rather than continue with a Master's degree or higher levels of education.

3.2 Well-being of the students in different areas

Table 3.2 Well-Being of the Students in Different Areas

Section 1: Well-being						
Questions	Region	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
1. Your daily routine is at risk of exposing yourself to COVID-19 infection	Rural Areas	3.23%	29.03%	29.03%	23.66%	15.05%
	Central	0.00%	29.41%	17.65%	35.29%	17.65%
	Bangkok	5.80%	34.78%	26.09%	21.74%	11.59%
	Overall	3.98%	32.74%	25.22%	25.22%	12.83%

2. You have a difficulty in accessing the basic needs, such as clean water; nutritious food etc. in the course of the pandemic	Rural Areas	8.60%	56.99%	19.35%	9.68%	5.38%
	Central	11.76%	44.12%	20.59%	11.76%	11.76%
	Bangkok	10.14%	52.17%	14.49%	17.39%	5.80%
	Overall	10.18%	53.54%	18.81%	12.29%	7.08%

Table 3.2 shows how the respondents consider their quality of well-being in the wake of the pandemic. It can be clearly seen that most students in rural regions of Thailand consider themselves at risk of getting infected with the COVID-19 pandemic. The number of students responding “agree” and “strongly agree” combined are more than the number of the students who responded “disagree” and “strongly disagree” altogether. Only students from Bangkok, which is considered as urban areas, considered themselves as less prone to getting infected with the virus. This explains that in the wake of the pandemic, students in rural areas are facing a relatively higher risk of virus infection in comparison to students in urban areas, which can be the result of various reasons.

One might be the typical lifestyle of city-dwellers. People in the city wear masks all the time in public places to respect social rules, and during lockdowns, they usually stay inside their homes as no public places are open for business. In rural areas, measures can be less strict and with people normally living in extended families, the risk of virus spreading in households would be higher than city-dwellers who normally live together with fewer members, due to the limited space in the city with a high population. In rural areas, there are also less facilities per person on average than in the cities where a convenience store is situated in between every few blocks. People in the rural areas usually need to move from place to place which are relatively far apart, which can lead to more time spent travelling and higher risk of infection accordingly. Public locations in rural areas are also less developed than in urban areas, for example, fresh markets that are more prone to infection than supermarkets with more controlled hygiene. Another reason can be the type of the job the students’ parents are pursuing. City occupations are usually located in closed spaces, buildings, offices, retail stores or department stores. As these public locations are closed during lockdown, the parents usually work from home which lessens the need of going out and lower risk of infection accordingly. Occupations in the countryside, on the other hand, contain more essential hands-on duties like jobs in the agricultural sector. Remote working cannot be applied to agriculture, therefore, parents who need to continue working in this department have to risk their lives everyday to work outside which can be dangerous if they carry the virus infection to the members of the family at home as well.

The second half of the table demonstrates how the respondents consider their quality of living, signifying they received adequate access to basic physical needs to sustain a life during the pandemic which are food, water, sanitation and healthcare services. Most of the responses

lean towards disagreement, saying that they received adequate access to those needs and do not have a major difficulty in acquiring them. However, there is still a considerable portion of respondents who “agrees” and “strongly agrees” with the statement. We believe that it is because the lack of basic needs and resources can be a problem that scatters throughout the country, with only some specific areas of each region that are facing this particular issue. Water shortage, inadequate access to welfare and government services can be limited to some areas or some groups of people which could be living in any region of Thailand. In consequence, the responses come out quite randomly with no unanimous majority in any region.

3.3 Family situation of the students in different areas

Table 3.3 Family Situation of the Students in Different Areas

Section 2: Family						
Questions	Region	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
1. You are financially affected by the COVID-19 pandemic	Rural Areas	1.08%	16.13%	17.20%	21.51%	44.09%
	Central	5.88%	23.53%	11.76%	17.65%	41.18%
	Bangkok	0.00%	11.59%	20.29%	33.33%	34.78%
	Overall	1.77%	15.04%	17.26%	24.78%	41.15%
2. Your family members' careers are affected by the COVID-19 pandemic	Rural Areas	1.08%	15.05%	17.20%	25.81%	40.86%
	Central	2.94%	8.82%	17.65%	14.71%	55.88%
	Bangkok	0.00%	1.45%	8.70%	7.25%	82.61%
	Overall	1.77%	12.83%	17.70%	22.57%	45.13%
3. Your access to the welfare during the COVID-19 pandemic is insufficient	Rural Areas	1.08%	9.68%	7.53%	29.03%	52.69%
	Central	0.00%	11.76%	2.94%	20.59%	64.71%
	Bangkok	0.00%	5.80%	2.90%	10.14%	81.16%
	Overall	2.12%	8.40%	8.40%	26.99%	53.98%
4. Your family bonding loosens during the COVID-19 pandemic	Rural Areas	6.45%	38.71%	27.96%	18.28%	8.60%
	Central	5.88%	38.24%	11.76%	23.53%	20.59%
	Bangkok	10.14%	31.88%	20.29%	21.74%	15.94%

	Overall	7.96%	38.94%	21.24%	19.47%	12.39%
5. Your future goals appear to be vague during the COVID-19 pandemic e.g. in terms of further study, career	Rural Areas	6.45%	12.90%	10.75%	18.28%	51.61%
	Central	2.94%	20.59%	2.94%	17.65%	55.88%
	Bangkok	5.80%	13.04%	15.94%	17.39%	47.83%
	Overall	5.30%	16.81%	12.39%	18.14%	47.34%
6. Your family members set the expectations for your future study or career	Rural Areas	3.23%	8.60%	15.05%	25.81%	47.31%
	Central	5.88%	14.71%	8.82%	32.35%	38.24%
	Bangkok	4.35%	10.14%	11.59%	26.09%	47.83%
	Overall	3.54%	8.85%	14.16%	26.11%	47.34%
7. You are unable to opt for the study or career independently of financial concerns	Rural Areas	4.30%	16.13%	9.68%	24.73%	45.16%
	Central	2.94%	23.53%	14.71%	20.59%	38.24%
	Bangkok	13.04%	13.04%	18.84%	15.94%	39.13%
	Overall	6.64%	16.81%	14.60%	19.91%	42.03%

Table 3.3 illustrates the responses in the category associated with families.

Firstly, we measured whether the financial impact resulting from the pandemic has any difference between the rural and urban areas in Thailand. The results have shown that the majority of the respondents are financially impacted by the pandemic, even severely, as the responses of “strongly agree” also outweigh the responses of “agree” by a large amount. However, there are no major differences between the rural regions and the urban area of Bangkok.

Secondly, we measured whether students’ family members received any financial impact from the pandemic. The results were relatively similar to the first question, but it is shown that the financial impacts towards the respondents in Bangkok were much more severe, with more than 82 percent stating that they strongly agree with the statement. 55 percent of the respondents in the central region and 40 percent of the respondents in the rural areas stated that they strongly agree with the statement. This is because the economy of the entire country is impacted by the emergence of the COVID-19 pandemic. Unemployment rate has increased since the pandemic began, with workers facing a possibility of job losses, reduced working hours, reduced income and little support from the government in return. However, the reason why the respondents from Bangkok claimed that their family careers are very impacted by the pandemic might be because the severity of the outbreak is more intense in urban areas with

higher population. Rural provinces faced less restrictions and measures during the pandemic, which might lead to less alterations in the professional life. Types of occupations in Bangkok are mostly jobs that work for specific firms and businesses, which its workers can face many alterations in the wake of the pandemic. Jobs in rural areas are mostly family-run businesses and agriculture, in which the workers work on their own and are less likely to be severely impacted.

Thirdly, we measured whether the respondents received sufficient welfare from the government during the pandemic, and the results were unanimous. The vast majority of the responses said that the welfare support was not adequate, with 81 percent of respondents in Bangkok said they strongly agreed with the statement in comparison to only 52 percent of respondents in rural regions. This is because the distribution of welfare and government support is ineffective throughout the entire country such as vaccination. Bangkok, where its population is currently facing a higher risk of infection from a higher population density, might be the location where the welfare is unequally, unevenly and insufficiently distributed to its growing number of inhabitants.

Fourthly, we measured if the family relationship has negatively changed during the pandemic. The responses vary, but with a slightly higher portion of responses leaning towards disagreement with the statement, saying that their family bonding was not loosened after the pandemic began. This might be because the social norms of the Thai population often lead to families living together in the same household, with frequent visits to relatives, leading to a tighter bond between the family members. However, a large portion of responses show that the family bonding can be altered after the pandemic began as well, which could be the result from various problems that arose during the outbreak such as financial struggles and the constant environment of staying at home for a long period of time. These issues could lead to stress, anxiety, mental health deterioration and family disputes. The responses from the respondents in rural and urban areas do not contain any major difference.

Fifthly, we measured whether the future goals of the students appear to be vague during the pandemic, and the results were unanimous with roughly the same percentage of responses in all of the regions. Approximately 47 percent said they “strongly agree” with the statement while approximately 18 percent said they “agree with the statement” of having vague goals about their future education or career during the COVID-19 pandemic. Students in Thailand faced the exact same circumstances of online learning, due to the nationwide school closures in response to the high number of infected patients being discovered daily. With standardized exams postponed or cancelled and only sources of education coming from online, students in all regions are all stressing out about the upcoming years of the future. This explains that the COVID-19 pandemic and its countermeasures have ultimately led to uncertainties in the lives of students.

Sixthly, we measured whether the students are pressured by the expectations from their family about their future education or career. The responses scattered, but with the majority again agreeing that their family has expectations about their future. Similarly in the seventh question where we measured whether the students have the ability to choose the future education or career path that they want regardless of financial concerns, most of the students also said that they cannot freely decide on their future without concerning the financial capability as well. The responses were relatively equally divided among all the regions. This is because the results would be the same whether the respondents come from the rural or urban area, but would be different among the socio-economic status of each student's family. Families with a higher income rate and a higher economic status have the possibility to worry less about the future, as money would not be a priority concern. On the other hand, families in less wealthy families might have less choices to pursue something they "want" but to pursue the career path that would allow them to make a living in the future.

3.4 Perspective on education of the students in different areas

Table 3.4 Perspective on Education of the Students in Different Areas

Section 3: Education						
Questions	Region	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
1. You consider the education during the COVID-19 pandemic to be ineffective	Rural Areas	1.02%	6.12%	5.10%	29.59%	58.16%
	Central	0.00%	8.82%	2.94%	14.71%	73.53%
	Bangkok	2.90%	2.90%	10.14%	37.68%	46.38%
	Overall	1.77%	4.87%	7.52%	24.78%	61.06%
2. Your grades are negatively affected since the COVID-19 pandemic has begun	Rural Areas	2.04%	14.29%	16.33%	28.57%	38.78%
	Central	5.88%	14.71%	20.59%	8.82%	50.00%
	Bangkok	8.70%	15.94%	14.49%	27.54%	33.33%
	Overall	4.87%	16.81%	16.81%	24.34%	37.17%
3. You are unsatisfied with the schooling methods during the COVID-19 pandemic	Rural Areas	1.02%	12.24%	22.45%	23.47%	40.82%
	Central	0.00%	14.71%	11.76%	11.76%	61.76%
	Bangkok	4.35%	7.25%	21.74%	31.88%	34.78%
	Overall	2.65%	11.05%	19.03%	24.34%	42.48%

4. You are more reluctant to study during the COVID-19 pandemic	Rural Areas	1.02%	6.12%	7.14%	16.33%	69.39%
	Central	0.00%	8.82%	2.94%	8.82%	79.41%
	Bangkok	1.44%	1.44%	7.25%	21.74%	68.12%
	Overall	1.33%	4.87%	6.19%	15.49%	72.12%
5. You consider tuition fees inappropriate for the quality of education received	Rural Areas	1.02%	7.14%	10.20%	23.47%	58.16%
	Central	2.94%	11.76%	8.82%	5.88%	70.59%
	Bangkok	5.80%	2.90%	5.80%	24.64%	60.87%
	Overall	3.10%	7.08%	7.96%	21.24%	60.62%
6. You have insufficient equipment for studying, such as tablets; stationery items; stable internet connection	Rural Areas	7.14%	47.96%	21.43%	12.24%	11.22%
	Central	5.88%	44.12%	8.82%	11.76%	29.41%
	Bangkok	11.59%	34.78%	21.74%	14.49%	17.39%
	Overall	8.41%	43.81%	21.68%	11.06%	15.04%
7. You are living in an unsuitable environment for studying	Rural Areas	2.04%	19.39%	26.53%	30.61%	21.43%
	Central	0.00%	32.35%	14.71%	26.47%	26.47%
	Bangkok	10.14%	18.84%	21.74%	18.84%	30.43%
	Overall	4.87%	22.57%	22.57%	24.78%	25.22%

Table 3.4 illustrates the responses of questions about students' education, whether their education during the pandemic is being carried out in an effective way. The responses from the students in all of the regions went relatively the same way for all of the questions.

Firstly, roughly 25 percent of the students agreed and more than 60 percent of the students strongly agreed that they considered the education during the pandemic ineffective. This can be because all students from all regions face the same circumstance of online learning, which can be ineffective due to the lack of engagement and limited physical interaction. Secondly, the majority of the respondents agreed that their grades and scores were negatively affected during the pandemic, meaning that their academic performance went downwards since the beginning of the pandemic, due to the negative consequences of online learning stated earlier. Thirdly, the majority of the respondents are unsatisfied with the school methods during the pandemic, suggesting that they are not satisfied being at home and pursuing online classes.

This demonstrates that students prefer on-site schooling with more interactions and engagement during classes, as online classes can be stressful and tedious. Fourthly, the vast majority of the respondents of 72 percent strongly agreed that they are reluctant to study online, which shows that their productivity level is low in the wake of the pandemic due to no motivation during virtual classes. This clearly demonstrates that online learning is ineffective for most of the Thai students, regardless of the areas they are living in or the location of their schools, as the students are performing worse academically as well as losing productivity and motivation to study.

Fifthly, 60 percent of the respondents strongly agreed and 21 percent of the respondents agreed that they do not think that tuition fee during a pandemic is an appropriate amount to pay. This is because with the implementation of online learning and lockdown measures, the students are continuing their studies at home without going to the campus. This signifies that they would not have the opportunity to access the available facility on the campus, or profit with the interactions with peers at school.

Sixthly, we measured whether the students have adequate equipment for studying including electronic devices and basic items like textbooks and stationery. Most of the students have the ability to possess sufficient equipment for their studies, but a large minority do not. They would most likely need to use their own financial income to supply the electronic devices as schools reportedly do not support students with materials during the pandemic. Seventhly, we asked the students if they are in a suitable environment for studying, in which the majority claimed that their environment is inappropriate. This can be the result of various reasons such as having no proper workspace at home, noise pollution and disturbance from other family members or the location they are living, which can be a major factor that contribute to unsuccessful online learning.

Overall, education is severely affected during the pandemic for students in all regions of Thailand with ineffective online learning that has resulted in negative academic performance, dissatisfaction and lower productivity.

3.5 Mental health of the students in different areas

Table 3.5 Mental Health of the Students in Different Areas

Section 4: Mental Health						
Questions	Region	Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree
1. Your mental health is negatively affected by the COVID-19 pandemic	Rural Areas	2.04%	10.20%	13.27%	29.59%	44.90%
	Central	2.94%	11.76%	0.00%	11.76%	96.15%
	Bangkok	7.25%	4.35%	15.94%	24.64%	47.83%

	Overall	3.54%	9.73%	11.06%	25.22%	50.44%
2. You are mentally struggling to pursue your life during the COVID-19 pandemic	Rural Areas	1.02%	14.29%	11.22%	27.55%	45.92%
	Central	2.94%	14.71%	14.71%	23.08%	50.00%
	Bangkok	5.80%	13.04%	14.49%	27.54%	39.13%
	Overall	2.65%	15.04%	13.27%	25.66%	43.36%

Table 3.5 illustrates the responses in the category of mental health, which has no major difference between the rural and urban inhabitants. Firstly, we asked the respondents whether their mental health deteriorated during the pandemic, approximately 50 percent of the respondents strongly agreed and approximately 25 percent of the respondents agreed with the statement. Unanimously, 96 percent of the respondents from the central region strongly agreed with the statement. With online learning that has occupied most of the students' time during the school days in the lockdown period, the lack of human interaction and engagement can ignite the possibility of mental health deterioration. In addition to the negative consequences from schooling, the students might be facing other issues ranging from financial worries and ambiguous future plans about their future career that have been increasingly impacting them in the wake of the pandemic.

The majority of the respondents also responded parallelly in the second question, in which we measured whether they considered themselves "struggling" to pursue their lives during the pandemic, and 43 percent of the respondents strongly agreed and 25 percent agreed with the statement. This explains how surprising it is that students aged between 14-19 years old are having so much struggles and problems during the pandemic that they called themselves as "struggling" throughout the days spent learning online at home. The pandemic has increased and unveiled several problems that affected the students in some way, whether financially, socially, physically or mentally, and can be considered as overwhelming for the students.

3.6 Educational problems during the COVID-19 pandemic

According to the responses, there exist several different problems in education during the COVID-19 pandemic where students had to pursue their studies through online methods. Most of the respondents stated negative implications that have resulted from online learning, which are mostly related to mental health deterioration and inconvenience during online classes. The problems do vary from person to person, but there also are some major problems that several students agree with altogether.

One major problem that online classes created towards students is the lack of motivation, encouragement and will to study. Many said that they could not force themselves to be sitting at their desks all day listening to teachers through the electronic devices' screens while some

even stated that they experienced “burnout”. This is similar to the information acquired in the data analysis, which clearly stated that the productivity level of the students during the pandemic is reduced. Another major problem is the ineffectiveness of online learning. Students answered that the teaching methods in online classes do not work, with incompetent teachers who failed to deliver the essential knowledge to the students. Hence, they could not acquire sufficient knowledge for the exams. The quality of the lessons is incomparable to the lessons they have received when they went to school on-site, as they could not understand nor catch up with what they were learning. The key to successful education is that students are able to acquire knowledge from the instructors, but without this essential part, the jigsaw cannot be completed.

Other problems that are stated by many of the respondents include the lack of concentration. Students claimed that they could not focus during online classes, and it required more energy to keep themselves concentrated with the lessons. Students also stated that their environment is not suitable for studying, with disturbing noise, or a desk situated next to the bed is a scenario that would not lead to much productivity and concentration during the study, in comparison to classrooms with equipment and environment made for education. Some faced the lack of equipment to study as well as the problems associated with internet connection, which obstructed them to learn flawlessly. Some stated that both their physical health and mental health deteriorated as they used electronic devices all day long. As a result, some suffered from backache, headache, sore eyes and overall physical health deterioration due to excessive online learning, sitting in one place the whole day. Too much homework given is a problem mentioned by a high number of students, as they could not manage the excessive workload, especially group work and presentation projects which became even more difficult to complete due to many technical incapacities. Some also stated that the exams are not an effective method to grade students, and should rather not be assigned. Some students mentioned the lack of school activities like academic competitions and sports day, which allowed them to find more friends and develop connections.

Less common answers are the problems about the uncertain future, laziness of studying, boredom and loneliness that resulted from a repeated routine, stress, depression, lack of communication with parents, peers and teachers, financial concerns and tiredness. One student who pursued a vocational college with engineering specialization stated that he could not pursue his studies at all, as it required on-hands learning with real materials and equipment. Another student said that her family assigned her too much housekeeping chores, which made it impossible for her to pursue her studies while managing familial duties at the same time. The problems each student had can vary, but these problems have all become major obstacles that stopped them from learning through online methods successfully.

4 Conclusion

After researching information from multiple sources as well as carefully analysing the data obtained from the survey, it can be inferred that both the COVID-19 pandemic and other variables (schools' location, parents' education level, parents' income) has impacted and widened the gap of inequalities in education.

Students' lives, in different factors ranging from well-being, family, education and mental health, are severely affected by the COVID-19 pandemic. The inequalities in education can be clearly seen during the pandemic. The severity of the impacts depend on their socio-economic status, which can be determined from the income of the students' parents. Students' parents' educational level associates with the students' parents' income. Most parents who obtained a high educational level often also possess a high income. However, there are no major differences between the impacts of the students in rural and urban areas.

Throughout the data analysis of the tables, referring from the answers of multiple choice questions, students' parents' educational level associates with the students' parents' income rate. Most parents who obtained a high educational level often also possess a high salary. Students considered themselves at risk of infection on a daily basis, especially in urban areas with higher risk of infection. Students have adequate access to basic needs, food, water and sanitation but this remains a problem in some of the areas in all of the regions.

Students and their families are financially impacted by the unemployment and the economic problems during the pandemic, especially in urban areas due to the highly restrictive measures of lockdown and businesses being closed down. Students stated that they do not receive sufficient welfare from the government. Family bonding of the students did not get loosened during the pandemic. Some students, especially in a lower socio-economic status, have the expectations of the future career or education from their parents and they have to at least concern themselves with the financial aspect of the job before deciding to pursue it.

The education during the pandemic, through "online learning" methods, created negative implications towards students. Students considered online learning ineffective, they are reluctant and unsatisfied to studying online and their academic performance downgraded. They also considered the tuition fees paid inappropriate to the quality of education they received. Most of the students have adequate access to equipment and do not have a major problem with the environment, however, a large minority of the students faced the two problems. Mental health is severely impacted by the pandemic. Most of the students considered their mental health deteriorated and themselves struggling during the pandemic. Students in the rural and urban areas do not have any major difference in responses.

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