

Nudging Thai Children: Behavioral and Experimental Economic Approaches to Enhance Education among Underprivileged Youth

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— *Review of* —
**Integrative
Business &
Economics**
— *Research* —

ABSTRACT

This study explores the effectiveness of nudges derived from behavioral economics in promoting educational engagement and outcomes among underprivileged youth in rural Thailand. Initial assessments of career aptitude and personality revealed a strong interest in vocational fields. Recommendations include enhancing vocational education guidance and skill development initiatives to address labor shortages. Moreover, nudges such as "recommended subjects" proved effective in guiding students' course selections, alleviating decision-making pressures. The cohort experiment highlighted the significant impact of commitment contracts in increasing study hours and days, emphasizing the value of self-commitment in enhancing learning efficiency. These findings underscore the potential of behavioral economics in designing supportive educational policies without resorting to coercion, offering promising avenues for addressing educational disparities among disadvantaged youth.

Keywords: Nudge, Peer Effect, Commitment Effect, Promoting educational outcomes.

Received 5 April 2024 | Revised 26 August 2024 | Accepted 3 October 2024.

1. INTRODUCTION

Education plays a pivotal role in shaping the future of individuals and societies, yet many underprivileged youths face significant barriers in accessing quality educational opportunities. In Thailand, a considerable number of children and adolescents encounter challenges in obtaining adequate education due to various socio-economic factors. According to the Equitable Education Fund (2023), out of the 8.9 million students aged between 3 and 14 years old in Thailand, an estimated 2.8 million belong to economically disadvantaged families, with an average income falling below the poverty line with

income 1,781 THB or 48.80 USD¹ per person per month. To address this pressing issue, our research project employs a behavioral economic approach, specifically utilizing experimental economic processes, to explore methods of promoting educational behaviors among underprivileged youth outside the traditional educational system.

Our study focuses on implementing interventions through the Thai Massive Open Online Courses platform (Thai MOOC), aiming to encourage disadvantaged youth with valuable learning opportunities. In addition, the Thai MOOC platform are freely accessible online courses open for enrollment to anyone. These MOOCs offer a diverse range of courses, including fundamental or core subjects align with the Thai educational system, vocational topics, and flexible courses designed to help individuals acquire new skills, advance their careers, and receive quality educational experiences on a large. Additionally, certificates are awarded to those who successfully pass the course evaluations. Therefore, Thai MOOC can be regarded as an additional educational option for underprivileged youth who are outside the traditional educational system.

Collaborating with three key related educational entities in Nakhon Phanom province, namely the Department of Juvenile Observation and Protection, Non-Tan Subdistrict Administrative Organization, and Piman Subdistrict Administrative Organization, we engaged a total of 87 youth participants. Among these, 39 were children and youth residing in the Nakhon Phanom Provincial Juvenile Observation and Protection Center, while the remaining participants, hailed from Non-Tan Subdistrict (32 individuals) and Piman Subdistrict (16 individuals) in Nakhon Phanom Province.

In addition, our project is a pilot initiative funded and supported by the Equitable Education Fund Thailand and UNESCO, thereby a local NGO known as the CYF Thailand Foundation for the Promotion of Children and Youth expressed interest and collaborated with us in this pilot study. They suggested Nakhon Phanom Province which located in the rural Northeast region of Thailand as the case study for this pilot project. The province is notable for its large number of underprivileged youths outside the educational system and the presence of a robust local NGO network capable of supporting the project. By focusing on this province, we aim to generate findings and lessons that can be adapted and generalized to other regions in the future, thereby extending the impact of our work beyond this initial pilot project.

Our research project is structured into two main phases. The first phase involves assessing children's preferences and aiding them in selecting suitable subjects for study. We utilized a career aptitude and personality assessment tool design by A-chieve (2023), enabling youth volunteers to identify appropriate career paths aligned with individual aptitudes and aspirations. Subsequently, participants were guided in selecting subjects from the Thai MOOC platform, with elective courses tailored to match their career preferences and personality traits. This phase allows us to examine the efficacy of providing educational guidance without compulsion, thereby encouraging youth to make informed decisions regarding their educational pursuits.

¹ As of March 29, 2024, based on the exchange rate, 1 USD equals 36.52 THB.

In the second phase, we explore the concept of behavioral economic nudging as a means of promoting effective learning among participants. Specifically, we experiment with two types of nudges: peer effect and commitment effect. Peer effect nudges involve revealing aggregate data on course study hours and attendances, leveraging social comparison to encourage increased study efforts. Conversely, commitment effect nudges entail participants making a written commitment to attend courses regularly, with periodic reminders reinforcing their promises. Through these nudges, we aim to stimulate positive behavioral changes conducive to academic success among underprivileged youth.

By combining insights from behavioral economics with experimental methodologies, our research endeavors to develop nudging strategies for enhancing educational outcomes among disadvantaged youth for the case study of Nakhon Phanom Province, Thailand. Through experimentation and analysis, we aim to provide evidence-based policy recommendations that can be implemented at the national level and area base level to address educational disparities and encourage underprivileged youth across the country.

2. LITERATURE REVIEW

Since the COVID-19 pandemic, e-learning or online learning has experienced significant growth. Many recent studies have examined the impact of e-learning from various perspectives. For example, Cariño & Mandigma (2024) and Lanuza & Cordova (2024) investigate the readiness for online learning in the Philippines and Qatar, respectively. Others, such as Susan, Winarto, Kambono & Prayogo (2024) and Sugandini, Istanto, Arundati, & Adisti (2022), focus on issues of trust, anxiety, and adaptation to e-learning technology. Additionally, comparative studies by Babalola & Onasanya (2024), Inada (2023), Tan & Chen (2021), and Chang, Wang, Lin, Cheng, & Chiang (2021) analyze the differences between physical and online classrooms.

Our study also delves into e-learning, aligning with the mentioned literatures. However, our focus is on how behavioral economic interventions influence student study behaviors through an online system, specifically using the Thai MOOC platform as our case study. The experimental design of our study focusing on student studying schedule determination through study time, study day, and the number of certificates received from the Thai MOOC system aligns with the behavioral economics concepts of commitment contract and peer effect.

Firstly, begin with the [1] Commitment contract, previous studies have explored the efficacy of commitment contracts in promoting goal achievement and self-regulatory behaviors (Frank & Scharff, 2013; Gollwitzer & Sheeran, 2009; Ein-Gar, 2015; Vičar, 2018; Weijers *et al.*, 2022). These studies have provided valuable insights into the mechanisms underlying commitment contracts, shedding light on their potential applications in educational settings. Begin with the study of Ein-Gar (2015) which investigated the impact of committing to future virtuous behaviors under the shadow of tomorrow. The concept of the "shadow of tomorrow" refers to the mental projection of future consequences or outcomes of present actions. The study demonstrated that commitment contracts can enhance self-control and foster commitment to future behaviors, suggesting their utility in promoting adherence to predetermined study schedules and goals. This understanding of commitment's influence on behavior aligns with the broader concept of commitment contracts and their potential to shape educational

outcomes. Next, Frank and Scharff (2013) examined the effects of learning contracts in undergraduate courses on student behaviors and academic performance. Their research highlighted the positive impact of commitment contracts on student engagement and outcomes, emphasizing the importance of specifying contract terms to encourage goal attainment and consistency in study habits. By elucidating the role of commitment in driving behavior change and achieving academic success, this study contributes to the understanding of commitment-based strategies in educational contexts.

Another interesting study of Gollwitzer and Sheeran (2009) delved into the role of implementation intentions in self-regulating consumer decision-making and behavior. Their findings underscored the effectiveness of commitment-based strategies in translating intentions into action, thereby facilitating goal-directed behavior and adherence to predetermined study schedules. This research complements the findings of Frank and Scharff (2013) by emphasizing the pivotal role of commitment in promoting consistent study habits and academic performance among students. Moreover, Weijers *et al.* (2022) investigated the effectiveness of commitment nudges in improving online class attendance during the COVID-19 pandemic. Their research highlighted the influence of peer behavior on individual attendance decisions, suggesting that commitment-based interventions can leverage peer effects to promote desirable behaviors such as regular study habits and attendance. By exploring the interplay between commitment and peer effects, this study further underscores the potential of commitment-based strategies to enhance educational outcomes among students.

Expanding the scope to motivational factors, Vičar (2018) explored the relationship between self-confidence, commitment, and goal-setting among athletes at different performance levels. The study revealed the pivotal role of commitment in goal achievement, emphasizing its significance in sustaining motivation and perseverance in pursuit of academic objectives. This study provides valuable insights into the underlying mechanisms of commitment and its impact on goal attainment, highlighting its relevance in fostering academic success and resilience among students facing challenges in their educational journey.

Secondly, the next nudging strategy used in this research is [2] Peer Effect. Peer Effect, also known as the "Influence of people around you," plays a crucial role in shaping individual decisions and behaviors. This concept explains that individuals tend to make choices or behave in accordance with societal norms or the behaviors of those around them. Utilizing peer effect in nudging has been proven effective in various areas, especially energy conservation. Notable studies have demonstrated the impact of peer comparison feedback on reducing residential energy usage (Ayres, Raseman & Shih, 2013; Noll, Dawes & Rai, 2014; Mundaca & Samahita, 2020; Ruokamo *et al.*, 2022).

Ayres, Raseman, and Shih (2013) conducted large field experiments demonstrating that peer comparison feedback can effectively reduce residential energy usage. Their study provided evidence that disclosing information about peer energy consumption levels encourages households to adjust their behaviors to align with the observed norms, resulting in significant energy savings. Similarly, Noll, Dawes, and Rai (2014) investigated the role of solar community organizations and active peer effects in the adoption of residential photovoltaic (PV) systems. Their research highlighted the influence of peer networks and community dynamics in promoting the uptake of solar PV

installations, emphasizing the importance of social interactions in driving energy-related decisions.

Mundaca and Samahita (2020) examined the factors driving home solar PV uptake in Sweden, focusing on subsidies, peer effects, and visibility. Their study revealed that peer effects significantly influence the decision to adopt residential PV systems, alongside other factors such as subsidies and visibility. This underscores the role of social influence in shaping energy-related behaviors and adoption patterns. Additionally, Ruokamo *et al.* (2022) investigated the effect of information nudges on energy-saving behaviors through a randomized field experiment in Finland. Their study demonstrated that providing information about peer energy-saving practices can encourage individuals to adopt similar behaviors, leading to meaningful reductions in energy consumption. This highlights the potential of peer influence in facilitating behavioral change and promoting sustainable energy practices. All of these studies underscore the importance of peer effects in influencing energy-related behaviors and adoption decisions. By leveraging social norms and peer dynamics, interventions can effectively encourage individuals to adopt energy-saving practices, contributing to broader sustainability goals and environmental conservation efforts.

In summary, these studies provide empirical evidence supporting the efficacy of commitment contracts and peer effects in influencing behavior and achieving desired outcomes. By integrating insights from behavioral economics and experimental methodologies, our research aims to build upon this knowledge base and contribute strategies for enhancing educational outcomes among underprivileged youth participating in Thai MOOC courses. Through experimentation and analysis, we seek to study the mechanisms underlying commitment contracts and peer effects, with implications for policy and practice in promoting academic performance among disadvantaged populations.

3. RESEARCH METHODOLOGY

The research methodology for this study is designed to address the research objectives of promoting educational behavior among youth, particularly those from underprivileged backgrounds. We recruited 87 youth volunteers for our experiment, all residing in Nakhon Phanom province, a rural area in Northeast Thailand. We chose Nakhon Phanom as our case study because we received support from CYF Thailand, a local NGO known as the Foundation for the Promotion of Children and Youth, which also expressed interest in participating in our project. With CYF Thailand's assistance, we gathered 87 youth volunteers, including 39 from the Nakhon Phanom Provincial Juvenile Observation and Protection Center. The rest of the participants came from Non-Tan Subdistrict (32 individuals) and Piman Subdistrict (16 individuals) within Nakhon Phanom Province. The methodology consists of two main parts: Part 1 involves the assessment of children's preferences and subject selection, while Part 2 focuses on identifying and implementing nudges to promote effective learning efficiency.

In Part 1 of our study, we utilized a career aptitude and personality assessment tool developed by A-chieve (2023) to evaluate each participant's aptitude and personality. Following an orientation session for all participants, during which they were informed of their roles and responsibilities in the program, including: [1] Introduction to Thai MOOC

and guidance on accessing and utilizing the system, [2] Enrolling in one core course and selecting elective courses from a pool of 10 options based on their interests, [3] Upon successful completion of each course and passing the exam, receiving a certificate for that course. The experimental phase lasted for 2 months to observe their behavior as a cohort. Additionally, we provided free internet access via mobile SIM cards to ensure accessibility and continuous access to the Thai MOOC system throughout the experiment.

Following the initial orientation, where we assessed each student's career aptitude and personality, we aimed to investigate the effectiveness of nudging with priming “course recommended” (Table 1). Specifically, we recommended three elective courses related to each participant's aptitude and personality from the pool of 10 elective courses. However, participants retained the freedom to choose these recommended courses or any other course based on their preferences. This allowed us to examine the effectiveness of nudging as a method to influence behavior without coercion.

Table 1: Example of elective courses provided and “Course recommended” priming

List of Elective Courses

- Please select courses based on your personal interests, and you have the option to enroll in more than one course.
- “*” means Course Recommendations based on Career Aptitude and Personality Assessment, however participants retain the freedom to choose any elective course according to their preference

| Course | Recommended |
|---|-------------|
| <input type="checkbox"/> Good Health and Wellness | |
| <input type="checkbox"/> Creativity for Self-Development | |
| <input type="checkbox"/> English for Social Communication | * |
| <input type="checkbox"/> Global Citizenship | |
| <input type="checkbox"/> Basic Mechanic Skills | |
| <input type="checkbox"/> Basic Digital Skills | |
| <input type="checkbox"/> Media Literacy | |
| <input type="checkbox"/> Wellness and Mindfulness Practices | |
| <input type="checkbox"/> Basic Financial Literacy | * |
| <input type="checkbox"/> Effective Communication Skills | * |

Regarding Part 2 of the research methodology, our study aims to investigate the effects of nudges, specifically peer effect and commitment effect, on promoting student learning behavior measuring by study time, days, and number of certificates via the Thai MOOC system. Peer effect nudges involve the display of aggregate weekly data on course study hours and attendances, leveraging social comparison to encourage increased study efforts among participants. By providing participants with insights into the study habits and attendance rates of their peers, we aim to foster a sense of comparison or competition that might motivate greater engagement with the learning materials.

Commitment effect nudges entail participants making a written commitment to attend courses regularly, with periodic reminders reinforcing their promises. Participants are encouraged to design their own commitments, allowing them to specify the days and times during which they pledge to engage with their studies. We then send reminders of their self-designed commitments on a weekly basis to reinforce their dedication to their learning goals.

For this phase of the study, we exclusively focus on participants from Non-Tan Subdistrict (32 individuals) and Piman Subdistrict (16 individuals). This decision is based

on the exclusion of participants from the Nakhon Phanom Provincial Juvenile Observation and Protection Center from this 2x2 nudge cohort experiment (Table 2). Within this experiment, we conducted a two-month cohort study by grouping participants into four treatment categories. Treatment 1 comprised a group that participated in our 2-month Thai MOOC program without the implementation of either nudge. Treatment 2 involved a group without commitment but with disclosed or revealed peer data. Treatment 3 consisted of a group with commitment but without disclosed peer data. Finally, Treatment 4 encompassed a group that both committed to the program and had peer data disclosed.

Participants from the observation and protection center are subject to a predefined schedule dictated by the center, making it impractical to implement the peer effect and commitment effect nudges in this context. However, we still collect data from the group under the Nakhon Phanom Provincial Juvenile Observation and Protection Center to compare the outcomes between educational schedules fixed by the center and those self-designed by students outside the center. This comparative analysis allows us to assess the impact of institutional scheduling on student learning behavior and the efficacy of peer effect and commitment effect nudges in fostering academic engagement and achievement.

Table 2: Experimental Design 2x2

| 2x2 | Closing Peer data | Disclosing Peer data |
|--------------------|-----------------------------|-----------------------------|
| Without Commitment | Treatment 1 (18 persons) | Treatment 2 (14 persons) |
| With Commitment | Treatment 3 (7 persons) | Treatment 4 (9 persons) |

4. RESEARCH FINDINGS

Based on the first part of the study, which involved assessing the career aptitude and personality of the youth volunteers using a test developed by A-chieve (2023). The results indicated that occupations in the vocational field, particularly technical professions, closely aligned with the aptitudes and preferences of the sample group. Among the most identified dream careers were roles such as car mechanics, mechanics, and electricians. However, the study also revealed a diverse range of career aspirations among the participants, spanning across various sectors including agriculture, business, and education.

During the next phase of the study, participants were provided with priming “recommended” for elective subjects based on their career aptitude, dream career, and personality traits. The aim was to assess the effectiveness of providing guidance without coercion in helping students make educational decisions. The results revealed that a significant majority, specifically 63.6 percent of the sample, opted to choose subjects according to the recommendations provided. This finding suggests that offering guidance based on individual aptitudes and aspirations can effectively influence students' choices in selecting elective courses.

The utilization of guidance guidelines presents an alternative approach to nudging students towards choosing subject groups that are conducive to their personal development. By aligning elective course recommendations with participants' career aspirations and personality traits, educators can encourage students to make informed decisions that resonate with their interests and capabilities. Moreover, this indicates the potential for such guidance to serve as an educational aid, particularly for children and youth who may lack access to information or experience in decision-making.

Moving to the results of the second part of this research, the cohort nudging experiment, Table 3 presents the experimental outcomes of each treatment, including the case of the Nakhon Phanom Provincial Juvenile Observation and Protection Center, over the 2-month cohort experiment. Meanwhile, Table 4 illustrates the results of three regression analyses where study hours, study days, and the number of certificates received are employed as dependent variables. These analyses aim to examine the impact of several independent variables, including Commitment-effect, Peer-effect, Gender, Age, and the condition of supporting family income, on participant's study performance.

Regarding Table 3, it is evident that Treatment 3 and 4 groups, which involve making promises or commitments, exhibited a higher number of school days and course hours compared to Treatment 1 and 2 groups. This trend holds true when considering both the mean and median values. When comparing Treatment 1 with Treatment 2, where only peer data is disclosed, it is evident that the absence of commitments may lead to an increase in academic averages. This suggests that both commitment and peer effects can result in higher enrollment numbers and study hours in the course. However, based on the simple statistical results, commitment appears to be more effective. Nevertheless, the data does not provide conclusive evidence regarding the difference in the number of certificates received. All four treatments showed a relatively low average number of certificates per person. On average, each group received less than 1 certificate per person, suggesting that the pursuit of certificates may be influenced by individual factors. Receiving a certificate requires effort and knowledge to pass the exam, implying that attending class alone does not guarantee success in the curriculum.

Meanwhile, upon comparing the results from Treatment 1-4 with the group of participants at the Nakhon Phanom Provincial Juvenile Observation and Protection Center, notable differences were observed. The group at the center exhibited significantly higher academic outcomes, including study days, study hours, and the number of certificates received, in comparison to Treatment 1-4. This finding aligns with our hypothesis, suggesting that participants at the Provincial Juvenile Observation and Protection Center benefit from structured support provided by the center's officers. Consequently, they adhere to a regular study schedule established weekly by the center, which differs from the youth participants in Treatment 1-4, who have the freedom to choose their study times based on personal preference or availability. Therefore, the average number of certificates received per person for the youth participants in the Provincial Juvenile Observation and Protection Center is 2.97, or approximately 3 certificates per person during the 2-month period. In contrast, the average number of certificates received per person for the other groups is less than 1.

Table 3: Experimental Result

| | Study days | | | Study hours | | | Number of Certificates Received | | | |
|--|------------|--------|------|-------------|--------|-------|---------------------------------|------|--------|------|
| | Mean | Median | S.D | Mean | Median | S.D | Total | Mean | Median | S.D |
| Treatment 1 | 1 | 0 | 2.25 | 1 | 0 | 3.29 | 0 | 0 | 0 | 0.00 |
| Treatment 2 | 3 | 2 | 2.62 | 6 | 2 | 10.07 | 5 | 0.36 | 0 | 0.84 |
| Treatment 3 | 6 | 4 | 6.82 | 14 | 3 | 22.36 | 4 | 0.57 | 0 | 0.97 |
| Treatment 4 | 6 | 3 | 8.39 | 6 | 1 | 10.01 | 5 | 0.56 | 0 | 1.67 |
| Treatment in the Nakhon Phanom Provincial Juvenile Observation and Protection Center | 5 | 5 | 1.19 | 32 | 30 | 21.33 | 116 | 2.97 | 2 | 2.68 |

In addition, econometric analysis was employed to examine the impact of various independent variables on academic performance. According to Table 4, it was found that the presence of a commitment contract resulted in a statistically significant increase in study days (approximately 5 days) and study hours (approximately 10 hours) at a 99% confidence level. Additionally, it remained statistically significant at a 90% confidence level in increasing the number of certificates (around 2 certificates) compared to treatments without the commitment effect over the 2-month experimental period.

Table 4: Regression Analysis

| | Model 1 | | Model 2 | | Model 3 | |
|---|----------|------|----------|------|--------------|------|
| Dependent variable | Days | | Hours | | Certificates | |
| Independent variable | β | prob | β | prob | β | prob |
| Constant | 11.89** | 0.01 | 32.21** | 0.01 | 2.31** | 0.03 |
| Commitment-effect (A dummy variable equal to 1 indicates that students are in the group with commitment, and 0 otherwise) | 5.76*** | 0.00 | 10.07*** | 0.00 | 0.60* | 0.05 |
| Peer-effect (A dummy variable equal to 1 indicates that students are in the group with peer-effect, and 0 otherwise) | -1.98 | 0.11 | -6.25* | 0.06 | -0.15 | 0.59 |
| Gender (A dummy variable equal to 1 indicates that the student is male, and 0 otherwise) | -0.25 | 0.29 | -0.99 | 0.13 | -0.08 | 0.15 |
| Age (A quantitative variable) | 1.29 | 0.27 | 3.25 | 0.29 | 0.00 | 0.99 |
| The condition of supporting family income (A dummy variable equal to 1 indicates that the student has to do a part-time job to support | -7.89*** | 0.00 | - | 0.00 | - | 0.01 |
| | | | 15.87*** | | 0.92** | |

| | | | | | | |
|---------------------------------|----------|------|---------|------|--------|------|
| family income, and 0 otherwise) | | | | | | |
| F _{stat} | 11.48*** | 0.00 | 5.99*** | 0.00 | 3.22** | 0.02 |
| R ² | 0.60 | | 0.43 | | 0.29 | |

Note: *, **, and *** denote statistical significance levels at the 90%, 95%, and 99% confidence intervals, respectively.

Conversely, regression analysis revealed an insignificant negative relationship from peer-effect on study days and the number of certificates, with only a 90% significant decrease in study hours (around 6 hours). This suggests that the use of peer effect, or disclosing the mean, with the intention of making children feel less isolated in their learning, yielded results contrary to the assumptions made. It reflects the importance of exercising caution when disclosing the average, as a low average number of school days and study hours due to most participants not studying may lead children to perceive that "friends do not study either," potentially undermining their motivation to study.

Furthermore, the condition of supporting family income emerged as another educational constraint. This factor was significant at a 99% confidence level, resulting in a decrease in study hours (around 15 hours) and study days (around 7 days), and significant at a 95% confidence level in decreasing the number of certificates (around 0.92 or 1 certificate). Given that all participants in our research are underprivileged youth, some of whom have economic conditions requiring them to support their families through part-time jobs, these jobs are considered to have a substitution effect or displacement on study days and study hours.

Key findings from this stage of the research indicate that self-commitment and reminder strategies, where youths design their commitments and receive reminders, respectively, effectively enhance learning efficiency. These approaches result in an increase in the number of days and hours attended by youths, as evidenced by numerical changes observed in the experiment. Statistical significance from the econometric model reinforces these findings.

Contrary to initial hypotheses, providing students with average performance feedback did not yield the anticipated increase in study motivation. Instead, results indicated a reverse effect. This underscores the importance of exercising caution when implementing average performance feedback, as actual averages may not sufficiently motivate students to adjust their behavior. Furthermore, the study's econometric model highlighted that the necessity for youths to contribute to their families' income significantly impedes their school attendance. The burden of supporting family finances directly impacts youths' availability to attend school.

5. CONCLUSION AND POLICY RECOMMENDATION

In conclusion, this research presents main findings align with policy recommendations derived from the cohort experiment employing the concept of Nudge from behavioral economics. Firstly, based on the career aptitude and personality tests conducted on youth volunteers, we observed a notable interest in vocational fields among youth in rural areas of Thailand compared to their urban counterparts, particularly in major cities where the focus tends to be on general education. This finding aligns with reports from the Thailand Board of Investment (2023) and Jarukornsakul (2022), indicating a prevailing social

preference for general education over vocational education in Thai society. Additionally, Thai families often prioritize university education over vocational training for their children, contributing to labor shortages in industrial sectors, as highlighted by studies such as Thianthai *et al.* (2022), Wongmonta (2019), and Rukkiatwong, N. (2016), despite the potential quality of Thai vocational education. Therefore, it is recommended to enhance vocational education guidance alongside general education. Additionally, efforts should be made to enhance the development and recruitment of skilled youth in vocational fields. This approach will contribute to addressing labor shortages and mismatches between job roles and individual aptitudes within the country's industrial sector.

Secondly, our research revealed that priming with the phrase "course recommended" effectively nudged students towards selecting courses that aligned with their aptitude, personality, and desired career paths. Since, the studied sample group consisted of youths who are still relatively young and may have limited experience and responsibilities. Therefore, decision-making, and academic achievement among young individuals often require guidance and support, whether in recommending suitable subjects aligned with their needs or assisting in managing study schedules effectively to enhance academic discipline. Introducing nudges such as "recommended subjects" or "recommended study schedules" can provide valuable assistance to youths in making educational decisions, thereby reducing feelings of pressure or coercion.

Thirdly, based on the two-month cohort experiment, we observed that only the commitment contract significantly nudged participants to increase their study days and hours. Encouraging youths to make self-commitments in their education, where they design their own commitments, can significantly enhance learning efficiency. This approach, known as self-commitment, can be reinforced through regular reminders. It can be implemented both within and outside the classroom, across various semesters. It is crucial to design this approach in a manner that emphasizes encouragement rather than pressure.

Finally, the application of experimental economics, coupled with behavioral economic theory, presents another approach for designing policies to support education among underprivileged children and youth. The essence of the behavioral economics approach lies in devising alternative methods to influence behavior, such as nudges, incentives, and simulations, rather than resorting to coercion.

ACKNOWLEDGEMENTS

This research is a part of "the Economic Experiment Project and Evaluating the Social Return on Investment in Motivating Student Reading Behavior," which is funded and supported by the Equitable Education Fund Thailand and UNESCO. Additionally, we would like to express our gratitude to the Foundation for the Promotion of Children and Youth CYF Thailand, and the Nakhon Phanom Provincial Juvenile Observation and Protection Center for their valuable area-based support. Additionally, we extend our sincere thanks to the reviewers and editor of the Review of Integrative Business & Economics Research (RIBER) journal for their insightful comments and suggestions, which have greatly contributed to improving the academic quality of this paper.

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