



## **Exploring the Effectiveness of the Implemented Sufficient Economy Education Curriculum during Covid-19 Pandemic**

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This study explores the effectiveness of the integrated self-sufficient education curriculum developed in Dek Thai Kaem Sai for primary and secondary schools. A qualitative research methodology where a total number of nine (9) participants were selected using a nonprobability approach. Questions concern the awareness and effectiveness of implementing and integrating sufficient economy curriculum to the regular education curriculum. Response were analysed using thematic and discourse analysis. The findings reveal that the curriculum was adequate for the target audience, but the teachers implementing the curriculum also gained knowledge in their various homes. Also, there is an attitudinal and behavioural change from students by choosing organic foods over inorganic and junk foods. The findings further reveal that the implementation of this curriculum limit the negative economic effect of covid-19 movement restriction because several family households near the school environment have farms where plant and animals are raised. Thus, when covid-19 struck, the community had alternatives. Despite the significant effect of the curriculum, it is not clear if wider schools could be able to adopt this practice. This study assessed the effectiveness of the integrated self-sufficient education curriculum developed in Dek Thai Kaem Sai for primary and secondary schools. A qualitative research methodology where selective participants were selected using a nonprobability approach. The findings further reveal that implementing this curriculum limits the negative economic effect of covid-19 movement restriction because several family households near the school environment have farms where plants and animals are raised. Thus, when covid-19 struck, the community had alternatives.

**Keywords:** sufficient economy, education curriculum, Thai students, sufficient education curriculum, students

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## INTRODUCTION

The vision of King Bhumibol historically aligned with the economists' view where it was established that human wants are unlimited. Considering this, the former Thai king therefore thinks of making his country a self-sufficient nation. This idea birthed the concept of a sufficient economy. According to economists' notion, human wants are unlimited while resources are scarce. Consequently, to meet the demand and supply equilibrium, there exists a significant link between strict resource management, human attitude and production, wastage, and consumption behaviour (Barbier, 2013; Meran, Siehlow & von Hirschhausen, 2021; Tietenberg & Lewis, 2018).

Sequentially, one of the agenda of the United Nations (UN) in recent times is to build a sustainable economy where nations or countries produce what they can consume in the correct quantity to avoid resource wastage (Ajwani-Ramchandani, Figueira, de Oliveira, Jha, Ramchandani & Schuricht, 2021; Calicioglu & Bogdanski, 2021; Sharma, Vanapalli, Samal, Cheela, Dubey & Bhattacharya, 2021).

Although no economy has a record of being sufficient, even those well-planned to be utopia dubbed smart cities failed to make it to reality. The reason might be that their plans are too complex to execute, or the vision of implementing such serves the interest of a few rather than the majority, or there is no fund to finance the projects. Despite the limitation facing a sufficient economy, there have been parameters used to measure sufficiency level in an economy; that is, that area is self-sufficient. These sectors include food and energy production, clean energy production, overall agro-production, and social conservations (Engelken, Römer, Drescher & Welpé, 2016; Hong, 2019; Oladimeji, 2017; Trencher, 2019; Van der Ploeg et al., 2019).

Insights onto the available studies thus revealed that examining sufficient economy translates to measuring a targeted self-sufficient parameter of interest in the economy and not the economy as a whole being self-sufficient. Given this, earlier scholars identified several factors influencing a self-sustaining economy's reality.

These earlier investigations revealed that most previous studies focused more on the later stage of a sufficient economy. For example, Dragiewicz, Burgess, Matamoros-Fernández, Salter, Suzor, Woodlock and Harris (2018) and MacKenzie and Wajcman (1999) gave attention to the role of technology in shaping societal behaviour, Rizal and Anna (2019) and Zang, Liu, Yang, Woods and Fois (2020) attention was devoted to agricultural production and fisheries emphasize financial implications for a self-sufficient economy. It is acknowledged that several studies have invested much interest in identifying the effect, consequences, adoption and factors that enhance or contribute to sufficient economy, these include the studies conducted by Ubonsri and Pannun (2012), Hulse (2012), Lee and Endress (2015) and Topa and Zenou (2015).

One common feature about these studies is that sufficient economy was investigated from the macroeconomic view. Scholars focused on a sufficient economy's economic, social, and environmental effects (Merli, Preziosi & Acampora, 2018; O'Neill, Fanning, Lamb & Steinberger, 2018). Meanwhile, the most critical and vital picture of a sufficient economy has received lower attention from scholars across the globe (Reike, Vermeulen

& Witjes, 2018). Considering this, little to no attention was recorded given to the basic stage of creating a sufficient economy, instilling the behavioural knowledge of sufficient economy into the masses' psychology, specifically, at their tender age.

The behavioural aspect of a sufficient economy underlines the core values and objectives of creating the economy in the first instance. It also echoed the relationship between human behaviour and the economist's view of demand, supply, surplus, scarcity and equilibrium (Bardhan, 1988; Meppem & Gill, 1998; Seyfang, 2009). Hence, investigating sufficient economy will add to the growing number of works of literature. Still, it will expose the latent relationship between human attitude and scarce resources to create the needed sufficient economy. However, this research also considers the less investigated group in society (the school children dubbed as the economic foundation). Therefore, this study aimed to examine sufficient economy from the perspective of primary school students. It is paramount to devise ways of instilling the right attitude and manners in them. It is believed that primary students need the right skills, knowledge and mindset to develop a sufficient economy.

Hence, to produce a self-sufficient economy, citizens need to be taught the right attitude. Scholars not limited to Casinader (2021), del Carmen Pegalajar-Palomino, Burgos-García and Martínez-Valdivia (2021) and Saleem, Qadeer, Mahmood, Han, Giorgi, and Ariza-Montes (2021) believes such attitude should be directed towards the nation's foundation (that is, the school children at the early stage). Given this, the authors developed a sufficient economy curriculum, tested it, and investigated its effectiveness using an interview research approach to examine the perceptions of students, teachers, and parents of the developed curriculum's effectiveness. Given this, the research objectives are stated below:

The objective of this study is to answer the following proposed question on sufficient economy which are:

- i. To explore the effectiveness of self-sufficient economy curriculum on students' behaviour.
- ii. To investigate the effectiveness of sufficient-economy program in the society.

### **The Origin and the Importance of Sufficient Economy**

A sufficient economy is an idea that emerges from the heart of Thailand through the former king, by the name King Bhumibol. The concept or idea underlying this philosophy is producing what you consume through flexibility, morality, and knowledge applicable at any economic stage. The former Thai king had a vision of lifting his people out of poverty by developing the economy step-by-step. This approach includes strengthening the economic foundation by ensuring that most Thais have enough to depend on, after which it is advisable to pursue advanced economic development.

Meanwhile, in the king's word, sufficient economy means 'having enough to support themselves. Given this, several scholars, policymakers, and practitioners have examined the implementation of a sufficient economy in Thailand in anticipation of achieving its best objectives. Examples of such studies are not limited to Mongsawad (2008, 2010), Piboolsravut (2004) and Sarapirom and Sarkar (2018). All these scholars agree that

since implementing this sufficient economic philosophy, there has been drastic improvement in Thai's economy.

The study aim is achieved by dividing the whole work into subsections that includes: (i) why sufficient economy? (ii) relationship between developed nations and implemented sufficient economy education curriculum and sufficient economy attainment, (iii) methodology, (iv) interview protocols (v) discussion and (vi) conclusion.

### **Why Sufficient Economy**

The world as it is today is highly competitive. To keep up with the competitive force, nations devise strategies to suit their agenda while neglecting others' feelings or emotions. For example, scientists once developed genetically modified (GMO) crops that enhanced their profit-making ability leaving the society with various cancer stages. To reduce or eliminate future catastrophes, nations were advised to produce what they consumed (Oskamp, 2000; Lorek & Spangenberg, 2014; Weichselgartner, 2001). Given this, a sufficient economy is vital to keep society's health at its peak maintain social and mental health status. Economically, it is advised to have a sufficient economy so that dependence on food importation will be minimal (Addison, Sen & Tarp, 2020; Wallerstein, 1992; Woolcock, 2001)

Our society in recent years has been plagued with social vices that arise from an unbalanced ratio between production and consumption. This imbalance in economic and social values has caused unspeakable damage in our society. These include abject poverty, malnutrition, negative entrepreneurialism (theft, corrupt practices and scandal) (Anum, 2018; Federici, 2018; Middleton & O'Keefe, 1998). Hence, a sufficient economy based on gradual attitudinal and behavioural change is encouraged (Mongsawad, 2010; Sarapirom & Sarkar, 2018).

According to the study of Mongsawad (2008, 2010), Piboolsravut (2004) and Sarapirom and Sarkar (2018), the concept and philosophy of sufficient economy has played a crucial role in poverty alleviation, restoration of social order, and ornamental economy. This is because the concept and application of sufficient economy implement the adoption of flexibility and equilibrium with knowledge application. These characteristics serve as moral and ethical guidance to society over the western idea of corporate social responsibility that has no agreed standard. The concept considers achieving remarkable progress before moving to the next. This ensures a balanced and stable development (Jairak, Praneetpolgrang & Subsermsri, 2015; Piboolsravut, 2004).

The application of the concept of sufficient economy, according to Pruetipibultham (2010), amplifies sustainable development at various economic levels in society. Therefore, Kanchoochat, Aiyara and Ngamarunchot (2021) posit the significant importance of a sufficient economy to include inclusive growth. Likewise, Jairak, Praneetpolgrang and Subsermsri (2015) assert that sufficient economic philosophies have been adopted to enhance information technology development in Thailand. Therefore, from these evidence, it is rational to conclude that a sufficient economy is among the needed philosophies to achieve a balanced society.

Relationship between Developed and Implemented Sufficient Economy Education Curriculum and Sufficient Economy Attainment. Several scholars have examined the link between developing a curriculum and attaining a sustainable or self-sufficient society. Examples of these are not limited to Dagenais, Hawley and Lund (2003), Graziose, Koch, Wang, Gray and Contento (2017), Huang, Lin and Cheng (2010), Pandey (2011), VanTassel-Baska and Brown (2021), VanTassel-Baska, Bass, Ries, Poland and Avery (1998). Evidence from these scholars reveals a significant relationship between designed education curriculum and economic sustainability, although the levels at which the significance was observed varies.

VanTassel-Baska et al. (1998) argue the significant positive effect of implementing a sustainable education curriculum. Although the scholars posit that the observed effects were small, curriculum significance was observed. Likewise, a systematic review by Pandey (2011) concluded that the curriculum implemented over the years in India considers the cultural, social, economic, technological and communication advancements that influence or sharpen the Indian students' and teachers' behaviour.

A further study from Huang et al. (2010) notes that the investigated students in their research context values studies outside the classroom environment made possible via curriculum enhancement for sustainability. This has increased their competency and behaviour. Also, in the health sector, Graziose et al. (2017) conclude a significant effect of the developed nutrition education curriculum in reducing obesity and enhancing cost-effectiveness.

### **Sufficient Economy Education Curriculum and Sufficient Economy Attainment in the Developed World**

Although the philosophy of sufficient economy might sound alien to the developed world, the concept's idea is not strange. The sufficient economy idea refers to the sustainability idea in developed societies (Ciriacy-Wantrup & Bishop, 1975[ Griessler & Littig, 2005). The concept of sufficient economy, dubbed environmental, economic, or educational sustainability, has been one of the developed world's primary goals by ensuring that they produce what they consume and export the rest; rather than depending on the importation of what they consume (Clapp & Dauvergne, 2011; Shehabi, 2021). Given this, countries such as China, the United States of America (USA), the United Kingdom (UK), and a few others, through the adoption of a sufficient economy virtually in all the spheres of life, turn their national education into a self-sustaining education and educational hub for international students (Goldstone, 2002; Lake, 2018).

Despite having a sufficient economy as a sustainable economy in the west or developed world, there is no clear evidence or path to achieving a sustainable economy via education, as in Thailand. Given this, we have some insights into the developed world version of sufficient education and economy.

For example, a bid to achieve a sustainable economy makes Kozma (2005) investigate the role of ICT as a significant driver of a sustainable environment (economic development and social change). Findings from the study of Kozma (2005) successfully identified the connection between ICT sufficient curriculum, economic development,

and social development goals. A similar investigation by Nunoo and Andoh (2011) considering the effectiveness of financial literacy could help achieve a sustainable economy. The authors established a significant relationship between financial literacy and sufficient economy; however, the practicality is questioned.

Insight into the developed world reveals that despite efforts to achieve a sustainable economy, the focus of the developed world differs from that of the Thais. Also, there is limited evidence in the developed world to practicalize the theoretical connection between a sufficient educational curriculum and achieving a sufficient society.

### **Conceptual Framework (Experiential Learning Theory ‘ELT’)**

The experiential learning theory by Kolb serves as a research underpinning or conceptual framework which this investigation rested upon. According to Kolb and Kolb (2009), the experiential learning theory centres on learning by doing, exposing the students to real-life situations. According to Caffarella and Barnett (1994) and Fry and Kolb (1979), the ELT theory encourages learners to reflect and replicate what was learnt. Given this, students during classes are more active while their teacher serves as a guide and coach. Relating this concept of ELT theory to the context and content of a sufficient education curriculum, it is believed that it will allow students to replicate the learnt subject after class in their various homes. The rationale behind this subjective thought to support the adoption of this theory is that it is known that children, at most times, develop cognitive knowledge by mimicking and replicating teachers’ behaviour to their parents and peers (Azmitia & Hesser, 1993; Webster-Stratton, 2001). Given this stance, this theory is believed to be the best underpinning this study.

### **METHOD**

Although the sufficiency economy has been implemented in the study context Chumchonmai School is a community school that has had both primary and secondary education within the Walailak University environment since 2012. However, this philosophy was not extended to the school children to practice. Thus, the children are not formally exposed to sufficiency education at a tender age. Even though they might be aware of the concept from their parents, their school provides them lunch from farm produce grown in their school environment; considering this. This study, in its capacity, develop a curriculum that allows students to be exposed to the concept of sufficiency economy via theory and practice.

Since 2020 to develop and integrate the needed curriculum, meetings were made with the school director, administrators, committee, and teachers to schedule the work planning. After this, the education curriculum was drafted, and several deliberations were made. Some issues raised concern the curriculum contents, structure, teaching hours, and days. When all issues were cleared, the new drafted curriculum was then implemented. During the meetings, it was agreed that the students would be exposed to the practical content of the curriculum for two (2) hours a week.

From two years to achieve the research objectives, the researcher employs a qualitative research methodology approach where a live interview method of data collection is used

to gather the needed data from the respondents who are willing to be interviewed without any prejudice. The questions were ethically and legally constructed and the researcher convince the respondents that the responses will be analyzed anonymously and confidentially treated corroborating with the validity standard of Eisner (1991) and Lather (1991). A non-probability sample technique was used in selecting the research participants. Specifically, the researchers adopted a snowball sampling technique to select the needed participants in this study. The participants include nine (9) students, nine (9) parents and three (3) administrators (teachers and principal). The selected respondents are those who have significant experience of sufficient economy and not an outsider who is unaware of how the school operates. The semi-structured interview questions were designed in such a way that it captures the objective of this investigation. After which, the questions were modified by experts to suit this study's objective and context and content. An average of fifteen (15) minutes was allocated for each question. The parents, students and teachers were the focus group while the director was individually interviewed. The rationale for separating the director and the teachers are to avoid conflicts of interest with different responses because of hierarchical powers. This method was employed by Alexander, Brijnath and Mazza (2014) when conducting their study in a hospital setting.

The recorded interview from the study participants was transcribed for data analysis purposes. The data analysis follows a thematic and discourse analysis approach in the sense that the participants' responses are grouped and analysed based on themes (Alhojailan, 2012; Fereday & Muir-Cochrane, 2006). Likewise, these responses were analysed based on respondents' natural occurrence (Wooffitt, 2005). Therefore, during the data analysis process, constant comparative methods proposed by Glasiers and Strauss (1967) was employed. According to Creswell (2007), the comparative method is employed to merge the response categories and develop research themes. Therefore, the research themes were inductively developed through the analysis of the qualitative response of the interview scripts.

### **Research Participants**

The participants involved in this investigation includes five randomly parents and guardians, three students, two teachers in charge of the children projects, Dek Thai Kaem Sai and Thai school lunch and the school director were chosen. In summary, thirteen respondents whom were divided into four (4) groups were selected.

### **FINDINGS**

This section of the study presents the results of the interview. However, this section was divided into two namely, the data demography and interview response. The data demography presents the characteristics of the students who were the primary target and other participant interviewed in this investigation to ensure data validity.

#### **Data Demography**

This section of the investigation presents the data demographics. We observed that 75% (138) of the students studying at the school we interviewed are from a restrained

financial family; they live below the poverty line. At the same time, 50% (92) were from a broken home. The data statistics reveal that 6% (11) were malnourished, 4% (8) had learning disabilities. These statistics reveal that the school under investigation is indeed a disadvantaged school that need some sort of self-sustainable practices. Hence, the rationale of this study in this context is justified.

### **Interview Protocol and Response**

The interview questions are asked in the Thai language. Likewise, the responses were given in the same language as well. However, the questions and answers were translated into the English language. The first set of respondents (stakeholders) is the pupils' parents. Given this, the first question asked to the parents' concerns the program awareness. The rationale for choosing this question to start the interview is to prepare the parent's minds positively and relaxed so that their response can be as honest as possible (Dixon, 2015; Turner, 2010). Concerning their children's behaviour in trying to plant what the family would eat, food wastage reduction, buying only what they need and preservation. The following response was recorded from selected parents.

Furthermore, the aims of the questions asked tallies with the study's objectives by exploring the respondents' experiences on the school's self sufficiency. Hence, the questions themes centred on awareness, experiences and perceptions of sufficient economy.

### **Question 1**

#### **1. Did you know about this project and how?**

Response from Parent one and parent four:

*I came to know about the project from my children whenever I came to pick them up from school (Parent one).*

Furthermore, parent four claim to be aware of the concept when they came to pick their children.

*I asked them to demonstrate what they learn because it the culture I am rising them with. I always ask them to demonstrate what they were taught in school.*

*Additionally, parent four further states that one of her children request us (parent) to help her clear small space in the backyard so that she can start planting.*

Parent 2 and parent three claimed to be aware of the program because they are close to the management. They both argue that they are involved with the school managerial decision-making process. Therefore, they are familiar with the idea to expose the school children to the concept of sufficient economy.

However, they are not sure how this will work. For example,

*Parent two states that even though I am very much aware of the scheme to be introduce to the students, I wonder how the teachers will be successful in teaching these young children the sufficiency skills.*

Since the first question is based on asking the parents awareness about the awareness of the project, the philosophy of the second question seek to intensify the experiences of the parents on the effectiveness of the developed sufficient economy syllabus which their children were exposed.

## 2. What are your experiences about the project?

The parents' experiences concerning the effectiveness of the sufficient education are numerous. The significant experience most of the parents revealed is that their children are somehow inquisitive; that is, they notice that the questions they asked concerning food management, agriculture in recent times are higher than what they could imagine. For example, parent four says:

*Whenever they (the children) are back home, they do ask me how to plant crops that can germinate within one week so that we can harvest and eat it. Furthermore, they are keen to go to the farm. However, we only manage family garden for the kids to perform their learned experiment.*

Meanwhile, parents two, three and one says that their children are keen to draw agricultural tools such as cutlass, hoe, spade and seedlings. They further share the knowledge gained in school by mimicking the teachers and turning us' parents' and older people at home into their students. They claim to have no choice but to play along with them on the parents' accounts.

*Their intention at home is to make us their students, so we negotiate that if you want to teach me how to farm, you have to complete the task I gave you and listen to my instruction. In summary, I was able to find a good bargain in doing the house chores and them (my children) listening to me as a parent without spanking them (Parent two).*

According to the narration of parent three,

*Listening to my children's ideas on how to plant and breed animals after school in recent times, we were able to rejuvenate the once-abandoned vegetable garden collectively and the small-scale animal husbandry we once had at home. Their urge to practicalize what they learnt in school made this happen (Parent three).*

Despite the positive experiences reported by parents, they felt concerned about the children's health. They all complain about their children being tired after school. This serves as one of the set-back of the implemented sufficient economy curriculum.

The third question investigates the help rendered by the parents to the students on the experiences from their heirs. Therefore, question three centres on the help offered to these children by their parents.

## 3. What help does the parents do?

All the parents have this collective response that help their children by assisting them on the house garden and correct them when they do the farming in the wrong way or when they are eager to see the plant germinating by excavating the planted seed.

On parent's one account,

*My daughter couldn't wait for the maize seed she planted to germinate, she would remove it from the soil and replant it. When it refuses to grow, she felt sad. So, what I did to correct her was to do a competition farming style where we both plant maize seed to see which one grow first. She continues with her ways (removing the seed and replant) but I left mine to germinate. After two weeks we went back to the spot we planted, she felt sad again. That is when I told her not to remove the seed again after planting such.*

Aside this, the parents all agree to give encouragement and motivations to their heirs pertaining to the skills set they acquire with this sufficient economy syllabus.

*I encourage my children and their friends by telling them the reasons why they need to focus on why they needed to learn how to raise domestic animals and farming. I told them that if they learn how to farm, they will not be affected by the price of groceries nor do they need to buy chicken, pork or meat from the farmers, rather, they can take from what they have and eat anytime they want (Parent four)*

After investigating the help rendered to children by their parents, the scholars further investigate parents thought on the philosophy of sufficient economy course. Therefore, the following question was asked.

#### **4. What do parents think about the Sufficiency Economy Philosophy course?**

Parents opined that courses like this is crucial for students at a tender age and they are thankful that their children are part of program liked this, specifically, those parents with disabled children (impaired speech).

Parents with disabled children felt so much in love with the course because, they claimed their children who has difficulties in expressing their view because of speech impairment in the classroom do express themselves easily on the field whenever they are allow to practise the skills they learned in class. They claimed that their faces gloomed, and you can see the smiles writing all over their body. Likewise, when asked questions on the field, they feel free to answer more than the lecture time in class.

*In the words of parent two, I never knew my soon love farm work until the school start teaching them how to do farming and allow each student to have their own farm at home. My son will work, smile and play on the farm, eat and sleep for long time at night; something he did only when he was a baby (Parent five)*

Additionally, the parents have the opinion that the course implemented is helpful by encouraging hands-on practice by influencing their mental affect. Likewise, those children rejected from other schools due to low assimilation. However, encouraging to learn by their peers has enhance their mental affect. Also, the farming and plant illustration help them to connect with real life.

Concerning the economic benefits, the parents agree that in the long run, the outcome of the course outcome has help them to reduce expenditure, build societal and communal relationships because families share the harvest of the plants and animals raised.

Also, most of the unemployed youths in the area who do not have direct sufficient economy curriculum exposure indirectly learn from their friends and juniors who were exposed to sufficient education curriculum to be engaged in arable farming. With this, most of the unemployed youths are tapping from the knowledge gotten from the curriculum.

Moving forward, the perception of students on the sufficient economy curriculum was investigated. The researcher at this point interview the students on the assistance/help they received from their parents at home. The rationale is to have a balanced view of the subject matter

Most response from the children reveals the supportive nature of their parents. They present that coming home with the idea of planting crops and raising animals such as chicken is a welcoming idea by their parents. It was also revealed that their parent taught them on how to perform the agricultural process.

*In this regard, parent five gave positive expression concerning the curriculum that it is an avenue to revive organic agricultural practices by the youths residing in the area rather than depending on imported agricultural goods with less nutritional value.*

5. The last question examines the relationship between the sufficient economy curriculum and the heirs' behaviour during covid-19.

On this question, the interviewed parents agree with the curriculum's effectiveness. According to them, even before the covid-19, the students had their farms where plants and livestock were raised. So, during the movement restriction (lockdown), the family and community depend on these farm produce. Given this, the parents state that their community could only feel a lesser economic effect of covid-19 because they have access to alternatives.

The researcher also extends the interview to the teachers in the schools. The teacher gave their narrative on the effectiveness of the course on a self-sufficient economy.

The teachers acknowledge that the project was introduced in 2012, and it was directed to sharpen children's behaviour specifically, those who attend the 'special school' Thai Kaem Sai and Thai school to provide lunch for the children in this school. The teachers stated that plots of land were devoted to planting vegetables and raising animals. The objective is to encourage students to eat organic food, eat healthy foods and develop healthy food habits. However, along the line, students were equipped with the needed skills crucial in the future.

When asked the teachers on the effectiveness of integrating the sufficient-economy curriculum with the school education curriculum. The teachers posit that the curriculum is not just effective for the students, but they also have gained a lot from it. In their

opinion, it was evident that they gained some soft skills which they apply at their various houses to plant and raise animals. Likewise, they claimed to be more aware of the importance and benefits of eating organic foods over junk and inorganic foods that are readily available at the market.

Teacher one further states that, before exposure to the self-sufficient education in the school, she never thought of having her own farm either to plant or to raise animals because she believed those are for the poor people. However, over the years, after gaining the needed knowledge and skills needed to plant arable crops and raise animals like chickens, goats and catfish fishpond, she said she is making a profit out of it.

*Aside from that, over the years, I have become an expert who can teach self-sufficiency with no supervision because I search the internet to know and understand what is needed to integrate such programs to young children, such as those I am teaching (teacher one).*

Concerning the effect of the exposed self-sufficiency curriculum on the student behaviour, both teachers agree that there is a drastic change in the students' behaviour as regards food ethics, financial management, choice of food between organic and inorganic food and junk foods. Also, the children are interested to learn in class and on-farm because they are assured to be gaining the needed skills others do not have. Hence, they are proud of their school and teachers.

Despite eulogizing the curriculum, the teachers nevertheless made some crucial suggestions. In their words, they both agree that the school lacks publicity. The publicity will help the school attract more customers, donors, charity organizations and the government who introduced this program but has long forgotten it will remember the school and the special program it offers. With these, the teachers argue that the publicity will help the school generate more income within the community via sales of farm produce and the society at large via donors from philanthropists.

Similarly, an interview session was held with the school director, and the interviewer asked the director questions relating to the relevance of the curriculum concept to the school management.

The director categorically states the availability of the resources for the sufficient economy curriculum implementation because there have been plans for this program. The school has its own farm where animals are raised, and arable crops are planted. However, integrating these into the school program prior to this time seems to be an impossible task.

In the director's statement:

*If you'd ask me about this, let's say, five years ago, I will answer you bluntly do not stress yourself. However, the curriculum you 'referring to the researcher' taught me there is nothing as impossible provided there are resources and those willing to be engaged.*

Further questions were asked in the integration and the effectiveness of the developed sufficient economy curriculum. The principal stated that even though he had over 20 years of work experience, he never realized that the application of active learning was real. At first, he considers the two hours a week curriculum exposure as one of the normal extracurricular activities and, or environmental sanitation programs which over some few periods, the vibe will disappear. Nevertheless, that thought was proven otherwise.

Determining the course structure for each class is highly important. Making the course content elective for the secondary school has proven effective because the students in recent times voluntarily join the program. Furthermore, close monitoring the teachers implementing the curriculum by getting weekly feedback of their experience in class. Meanwhile, there is a general meeting every month to address the feedback and enhance the curriculum.

In conclusion, the researcher further asks the director how the program could be further enhanced. The director states the response similar to the teachers on publicity. However, the director has a different opinion. The director further suggests the expansion of this program to other schools. Nevertheless, the director stresses that their school will serve as a role model to other Thai schools that will implement a sufficient economic curriculum in the future.

## **DISCUSSION**

Recapitulating the objective of this investigation, which is to explore the awareness and the effectiveness of the developed and integrated self-sufficient economic curriculum. Evidence from the response of the participants reveals some interesting findings. These pieces of evidence posit a conclusion that indeed, the curriculum effectively alters the students' attitudinal and behavioural competence as regards sufficient economy (Griessler & Littig, 2005; Kolb & Kolb, 2009).

As evidence from the participants' responses, specifically, the teachers and parents, there is evidence that the implemented curriculum has been effective among the targeted audience. **The participants' responses technically points to the influence of ELT theory approach where students could reflect and reproduce the lesson concept** and apply these concepts and knowledge at will when needed (Clapp & Dauvergne, 2011; Shehabi, 2021). Given this, the effectiveness of sufficient education curriculum was felt beyond the school walls by influencing community social cohesion. This observation thus tallies with the conclusion of Novo-Corti et al. (2018), where they argue that social cohesion is among the parameters used in determining the behavioural effects of the developed curriculum. Also, the findings in this regard concur with the position of Pandey (2011), VanTassel-Baska and Brown (2021) and VanTassel-Baska (1998), concluding that the significant effect of a sustainable education curriculum is influencing a vibrant economy.

Similarly, the finding in this investigation, " teachers acknowledging practising the knowledge gained from the curriculum implementation, students implementing the knowledge gained by was found to be following that of Huang et al. (2010), VanTassel-

Baska et al. (1998), concluding the significant effect of sufficient education curriculum as an effective tool that enhances educational value, sharpens attitude, character and behaviour. According to the respondents, both teachers and teachers and the directors reveal that they are not sure about the implementation of the curriculum before developed curriculum implementation. They never believe the implementation is possible. One of the teachers believed that planting arable crops and raising animals was the thing of the less privileged. However, the curriculum caused a total change in the attitude of the teachers. The observation concerning this was found totally with Dagenais et al. (2003), Graziose et al. (2017), Huang et al. (2010) and VanTassel-Baska and Brown (2021). All of them conclude a significant effect of the developed curriculum on the targets' population attitude and behaviour.

As observed from the respondents' response, the implemented self-sufficient curriculum has not only been effective in creating social cohesion or providing economic alternatives during covid-19; it has also reshaped the students' attitude and behaviour towards eating healthy foods. Findings from Graziose et al. (2017) support the relationship between sufficient education curriculum implementation and healthy food consumption among students. According to Graziose et al. (2017), the education curriculum helps in reducing obesity. Meanwhile, findings from this context reveal prudence and choice of organic food over inorganic or junk foods.

Based on the findings and discussions in this study, the scholars suggest a wider implementation of sufficient education curriculum to other Thai societies. It is believed that more Thai communities are in remote areas.

## **CONCLUSION**

To sum up the investigation findings, it is affirmed from the respondents' responses that a sufficient education curriculum is effective in creating a sufficient economy. Furthermore, the findings reveal that the parents and the whole community are aware of the sufficient education curriculum due to the attitudes and behaviors of the exposed students in society. Similarly, the findings reveal that students exposed to the developed education curriculum exert value on the subject. Given this, they enjoy the practice on-farm at their various homes, giving the entire community an economical alternative and lessening the effect of covid-19 on food shortage. This is because students practiced the knowledge gained from the implemented curriculum.

Furthermore, the indirect effects of the curriculum are that youths in the community learn from their peers how to plant, do fishponds and raise animals. Likewise, the teachers and the director have different notions about the curriculum before teaching the students, and seeing the students had a change of thoughts and attitude to embrace sufficient-education curriculum. The curriculum implemented in the school untie the whole community via lunch cooking and sharing farm produce.

Despite the effectiveness, the teachers note that this curriculum lacks publicity. Given this, they proposed publicizing this curriculum among other Thai community schools.

Regarding future research, quantitative research methodology is encouraged to cover more prominent random sampled participants. A mixed-method research approach could as well be employed.

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